NAVAL POSTGRADUATE SCHOOL Monterey, California



THESIS

TELECOMMUNICATIONS TECHNOLOGY AND SERVICE CHANGES SINCE THE TELECOMMUNICATIONS ACT OF 1996

by

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The Telecom Act of 1996 was intended to address the lack of competition and reduce regulation in local telephone services and in other areas of the telecommunications sector. The competitive situation in telecommunications, particularly regarding local telephone services, has experienced a limited amount of positive change as a result of the Act. Local Telephone service consumers are still given little choice as the Incumbent Local Exchange Carriers (ILECs) continue to dominate coverage in the local loop.

The purpose of this thesis is to demonstrate the effects that the situation resulting from the Act had on the expansion of telecommunications options and the emergence of new technologies. This thesis also focuses on exploring to what degree competition in telecommunications has improved since 1996. Case studies of telecom companies are utilized to demonstrate how effective the regulations of the Act were in various telecom areas such as long-distance and local services. The convergence of technologies and applications is also identified as several providers combined to offer services such as Web hosting, Voice Over IP solutions, wireless, and long-distance. Problems such as the need for new networks in the local loop are identified and recommendations for potential solutions in the telecom industry are also given.

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TELECOMMUNICATIONS TECHNOLOGY AND SERVICE CHANGES SINCE THE TELECOMMUNICATIONS ACT OF 1996

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I. INTRODUCTION

A. PURPOSE OF THE STUDY

The purpose of the Telecom Act of 1996 was "to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies." In short, the Act was intended to address the lack of competition and reduce regulation in local telephone services as well as in other areas of the telecommunications sector.

During the period since January 1996 (when the Act was passed), the situation in telecommunications, particularly regarding local telephone services, has experienced a relatively limited amount of change. Local Telephone service consumers are still given little choice as the *Incumbent Local Exchange Carriers (ILECS)* or *Regional Bell Operating Companies (RBOCs)* continue to dominate coverage in the local loop.

The purpose of this thesis is to demonstrate the effects that the situation resulting from the Act itself had on the expansion of telecommunications options as well as the emergence of new technologies. The thesis will also focus on exploring to what degree competition in telecommunications has improved since 1996. Case studies of telecom companies will be utilized to demonstrate how effective the regulations of the Act were in various telecom sectors such as long-distance and local services. A discussion of the RBOCs and several startups, including their impact on current and emerging technologies, is also pertinent to an examination of the industry during the last six years. To summarize, the major focus will be on industry trends and major milestones since 1996 as well as emerging technologies.

B. MILITARY RELEVANCE

The primary benefits of this research lie in the value of the information and analysis to both military and non-military practitioners in the computer science and information technology fields. The study is of particular use to service members in the Computer and Information Systems (Marine Corps terminology) Military Occupational

¹ *Telecommunications Act of 1996.* Federal Communications Commission. 29 April 2002: 1. http://www.fcc.gov/Reports/tcom1996.pdf>.

Specialty (MOS) and related fields as they evaluate telecommunications systems to be acquired and implemented based on current regulations and technology available.

The discussion of applications such as *Voice-over IP (VoIP)* introduces a few potential military and civilian options for alternate telecommunications that have emerged. The significance of the topics discussed in the thesis extends beyond the telecom industry and its effects on the consumer. Professionals in the computer science and information management realms (i.e., Communication and Information Systems Officers) must certainly stay abreast of the changes in the telecom sector. For instance, their knowledge of the telecom sector relates to their ability to provide seamless communications services and accurate government contract advisement.

C. RESEARCH QUESTIONS

This thesis study provides answers or partial answers for the following primary questions:

- What impact has the Telecom Act of 1996 had on the telecommunications industry in terms of the advancement of its networks, equipment, and services?
- What recommendations can be made to improve upon the Telecom Act and the current situation in the telecom sector?

There are also several secondary questions that support conclusions for the primary questions previously listed:

- What impact has the Telecom Act had on local telephone services and equipment?
- What impact has the Telecom Act had on long distance telephone services?
- What effects did the second divestiture of AT&T in 1996 have on the telecommunications industry?
- What effects did the Bell Operating Company Provisions have on the ability of start-ups and existing *Competitive Local Exchange Carriers* (CLECs) to gain a foothold and introduce new technology to the industry?

D. GOALS OF THE STUDY

The goals of the thesis include the following:

- A review of major milestones in the telecommunications sector pertinent to the study.
- A description of the applicable portions of the Telecom Act of 1996.

- A description of the effects that the second breakup of AT&T (in 1996) had on the telecommunications industry.
- A discussion of the degree to which the Act fostered competition and promoted the introduction of new and innovative technology.
- An examination of emerging technologies in the telecommunications sector.
- A final analysis of the Act and recommendations for future regulations and actions in the telecommunications sector, based on the compiled research.

E. BACKGROUND

It is necessary to review the 1984 divestiture of AT&T in order to begin a discussion of the Telecom Act of 1996 and to thoroughly understand the environment in which this legislation emerged. AT&T had become one of the largest and most powerful companies in the world by the early 1970s. The company was commonly known as the "Bell System" and consisted of the following major operating units: long-distance service, equipment manufacturing (Western Electric), research (the famous Bell Telephone Laboratories), and local telephone service (the 22 Bell operating companies, which controlled over three-quarters of the local exchanges in the U.S.).

The U.S. Department of Justice filed suit against AT&T in November 1974 for violation of U.S. antitrust laws. The DOJ's lawsuit made several major allegations against the telecommunications monopolies (in their respective service areas), to include: (1) AT&T used its control over the "local loop" to restrict access to long-distance competitors, thus preserving its long-distance monopoly and (2) Since Western Electric supplied almost all of the telecom equipment used by the 22 Bell operating companies, AT&T was restricting competition from other customer premise equipment (CPE) manufacturers.² Essentially, AT&T – largely through the connections between its different operating units – had denied competition to telecom service consumers and equipment manufacturers.

At bottom, the DOJ was seeking to improve competition in the telecommunications industry. The divestiture of 1984 released AT&T from the provisions of the Consent Decree of 1956, the results of another antitrust lawsuit that

² Lundy, G. M. "Telecommunications in the US: from Monopoly to Competition." Naval Postgraduate School, Monterey, CA, August 1993: 14.

sought to limit AT&T's monopoly. The Consent Decree provisions are outlined in Table 1.1 as a foundation for understanding the antitrust lawsuit issued in 1974.

Major Provisions of the Consent Decree of 1956

- AT&T must restrict its business to "common carrier communications," subject to regulation.
- AT&T's subsidiary, Western Electric, was restricted to manufacturing equipment only for the Bell System.
- AT&T must allow any and all AT&T, Western Electric, and Bell Laboratories patents to be licensed to anyone desiring to do so.
- Summary: AT&T maintained monopoly on manufacturing equipment as well as local and long-distance services. But AT&T could not enter non-telecom markets (this became more significant later with the advent of computers).

Table 1.1. Consent Decree of 1956 Results.³

After several years of preparation and months in court, both sides (the DOJ and AT&T) came to a settlement, with eventual approval and modifications by Federal Judge Harold H. Greene. However, AT&T did not settle until after the government presented its evidence and Judge Greene denied AT&T's motion for dismissal. The settlement was known as the *Modification of Final Judgment (MFJ)* because it modified the Consent Decree of 1956, which had been called the Final Judgment. It was to go into effect on January 1, 1984.

The most significant provisions of the MFJ are outlined in Table 1.2. As a result of the MFJ, AT&T was out of the local telephone service business. This opened the doors for competition in long-distance services, largely because competitors such as MCI and Sprint were now on even legal ground with AT&T in the long-distance sector. The fact that the Bell operating companies were now completely separate from AT&T gave long-distance competitors the same access to local exchanges that was available to AT&T.

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³ Ibid. 9.

Major Provisions of the MFJ

- The 22 BOCs separated from AT&T and grouped into seven RBOCs
- RBOCs required to provide "equal access" to long-distance companies
- RBOCs may sell but not manufacture customer premises equipment (CPE)
- AT&T retains long-distance facilities and Western Electric
- Bell Labs divided between AT&T and RBOCs
- 161 Local Access Transport Areas (LATAs) defined for 48 contiguous states
- AT&T released from 1956 decree (i.e., can now compete in computer business)

Table 1.2. AT&T Divestiture (1984) Results.⁴

The 22 Bell operating companies became known as RBOCs and, since 1984 but prior to the Telecom Act of 1996, consolidated into seven RBOCs. The period following the Telecom Act saw the RBOCs consolidate further to the four that the U.S. currently has. (See Chapter III for more details.) Long-distance customers saw an improvement in both price and quality-of-service after 1984. However, the RBOCs maintained a monopoly in local service, a condition that was in part, an argument for the regulations of the Telecom Act. Another huge consideration that precipitated the Act was the advent of the Internet and its ramifications for both the telecommunications and broadcast industries. These concepts will be further explored in the next chapter.

F. THESIS ORGANIZATION

The remainder of the thesis is organized into the following chapters:

- Chapter II Telecommunications Act of 1996 Summary. This chapter summarizes the Telecom Act, while identifying remaining challenges and questions related to various sections of the Act. These questions are introduced for further study in the remainder of the thesis. The majority of this chapter covers the telecom, broadcast, and cable aspects of the Act.
- Chapter III Telecom Industry Since 1996. Tracks major trends in the sector since the introduction of the Telecom Act. Major topics covered include a period of litigation by the RBOCs following the passage of the Act and a series of mergers and corporate alliances since 1996.
- Chapter IV Long-Distance Competitors. Examines the three major competitors in this sector: AT&T, MCI WorldCom (later known as

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⁴ Ibid. 16.

WorldCom), and Sprint. Special attention is given to AT&T's second divestiture in 1996 as well as the events surrounding WorldCom during 2001-2002.

- Chapter V Telecom Start-Ups. Utilizes case studies of Global Crossing and McLeodUSA to examine the degree to which the Telecom Act fostered competition and encouraged the emergence of new companies in the telecom sector. Particular attention is given to McLeodUSA and its role as a CLEC in the post-Telecom Act era.
- Chapter VI Conclusion. Provides a final analysis of the Telecom Act, with a focus on the degree to which it accomplished its intended purpose. Additional attention is given to recommendations for future regulations, actions, and service changes in the sector.

II. TELECOMMUNICATIONS ACT OF 1996 SUMMARY

A. INTRODUCTION

The Telecommunications Act of 1996 is most recognizable to the general public for its inclusion of the Communications Decency Act (CDA) and the introduction of the V-chip. This is largely due to the tremendous amount of media attention these topics received as well as the emotional responses that these issues evoke. However, the most significant sections of the Act attempt to address how to foster competition in the traditionally monopoly-based telecommunications and cable industries. In fact, the purpose of the Act reads as follows:

To promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new communications technologies.⁵

In this sense, the underlying purpose of the Act is to take a major step toward increased competition and eventual deregulation, particularly in the telecommunications sector.

This chapter provides a summary of the Act itself so that the groundwork can be laid for discussions in subsequent chapters. The most significant aspects of each major section -- called Titles -- will be highlighted and described. The summary of each section will conclude with any apparent challenges or questions to be examined later in this study. The major sections of the Telecom Act of 1996 are:

- Title I Telecommunications Services
- Title II Broadcast Services
- Title III Cable
- Title IV Regulatory Reform
- Title V Obscenity and Violence
- Title VI Effect on Other Laws
- Title VII Miscellaneous Provisions

⁵ *Telecommunications Act of 1996.* Federal Communications Commission. 29 April 2002: 1. http://www.fcc.gov/Reports/tcom1996.pdf>.

The document begins with an overview, administrative considerations, and pertinent definitions (particularly in relation to the telecommunications section). This chapter will not review these definitions entirely but will cite them as necessary when discussing the appropriate topic. The Telecom Act of 1996 summary will begin with a review of Title I - Telecommunications Services.

B. TITLE I – TELECOMMUNICATIONS SERVICES

1. Summary

Perhaps the most important issue addressed in this section concerns the provisions established for providing access to local telecommunications markets for new competitors. This portion of the Act seeks to address the long-standing monopolies in the local market that have existed for incumbents (i.e., Regional Bell Operating Companies (RBOCs)). Title I requires local phone companies to resell their services to potential competitors at wholesale rates. This essentially seeks to give these competitors previously unavailable access to the majority of local phone loops owned by the incumbents.

Furthermore, Title I requires local exchange carriers to provide *number portability* in accordance with requirements (to be determined later) prescribed by the Federal Communications Commission (FCC). Number portability is defined in the Act as "the ability of users of telecommunications services to retain, at the same location, existing telecommunications numbers without impairment of quality, reliability, or convenience when switching from one telecommunications carrier to another.⁶ This is a clear attempt to make it less painful logistically for the average consumer to switch to a local telephone competitor, if desired.

In addition, the Act includes a provision for *dialing parity*, which requires all local exchange carriers

...to provide dialing parity to competing providers of telephone exchange service and telephone toll service, and the duty to permit all such providers to have nondiscriminatory access to telephone numbers,

⁶ *Telecommunications Act of 1996*. Federal Communications Commission. 29 April 2002: 5. http://www.fcc.gov/Reports/tcom1996.pdf>.

operator services, directory assistance, and directory listing, with no unreasonable dialing delays.⁷

This measure was added to specifically address the tactic by incumbent local exchange carriers of forcing customers to dial inordinately long numbers when they switched to a competing phone company. This part of the Act attempts to open up competition in the local market through a notably high amount of regulation.⁸

The Telecommunications Services part of the Act also permits Bell phone companies to compete in the long-distance service market, except in the territory that their local phone company covers. However, they must first allow competitors into their local market and comply with a checklist that is outlined in Title I. The "Competitive Checklist" includes provisions such as nondiscriminatory access to network elements; nondiscriminatory access to the poles, ducts, conduits, and rights-of-way owned or controlled by the Bell operating company at just and reasonable rates; unbundled local switching requirements; typical services such as 911 and directory services; access to databases and associated signaling for call routing and completion; and reciprocal compensation arrangements.⁹

In addition, Section 273 of Title I also permits Bell operating companies to expand into the realm of manufacturing telecommunications equipment if they comply with competition in their local markets. This section specifically states that a

...Bell operating company may manufacture and provide telecommunications equipment, and manufacture customer premises equipment, if the Commission authorizes that [company or its affiliates] to provide interLATA services.¹⁰

In short, these provisions establish the "rules of the road" if a Bell operating company wants to compete in the long distance (described in the Act as interLATA

⁷ *Telecommunications Act of 1996.* Federal Communications Commission. 29 April 2002: 7. http://www.fcc.gov/Reports/tcom1996.pdf>.

⁸ Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 64.

⁹ *Telecommunications Act of 1996.* Federal Communications Commission. 29 April 2002: 40. http://www.fcc.gov/Reports/tcom1996.pdf>.

¹⁰ *Telecommunications Act of 1996*. Federal Communications Commission. 29 April 2002: 48. http://www.fcc.gov/Reports/tcom1996.pdf>.

services) market. These measures also seem to encourage competition in the local market by providing the opportunity for Bell operating companies to compete in other markets. The effectiveness of these incentives will be discussed in subsequent chapters of this study.

Section 254 of Title I addresses the important concept of *universal service* and its related issues. The concept of universal service essentially means that telecommunications providers have an obligation to facilitate access "by each to all." As section 254 states, all customers should have access to "quality services...at just reasonable, and affordable rates." In short, a rural customer should have the same opportunity to make long distance and international calls as a customer who lives in Los Angeles or any other large, urban market. The most significant issue related to universal service that is addressed by this section is how groups such as rural customers as well as non-profit organizations such as schools and libraries will be subsidized for their access to the predominantly high-quality telecommunications that are currently available in this country. This section basically requires that this responsibility fall on the shoulders of telecommunications service providers. As an example, according to the Act, a local service provider will be responsible for any subsidies for qualified schools, libraries, and other organizations that may fall into its coverage area.

2. Remaining Challenges and Questions Related to Title I

Some challenges and questions emerge from Title I. The first is how the FCC will manage the tremendous amount of new regulations to foster an environment for competition. The legislators left much of the responsibility to the FCC, an indication of both the FCC's expanded role and the lack of understanding regarding many of the telecommunications issues on the part of the lawmakers. Furthermore, many of the determinations regarding the universal service fund are left to the FCC - a daunting task. Also, the FCC must deal with excluding certain non-profit organizations from the subsidy. This has a wide array of political implications and an expansion of the role of the FCC in the past.

¹¹ *Telecommunications Act of 1996*. Federal Communications Commission. 29 April 2002: 19. http://www.fcc.gov/Reports/tcom1996.pdf>.

Another major question is whether the opportunity to enter the long distance and manufacturing markets will really provide incentives for Bell operating companies to open their local markets to competition. In short, can they make more money by simply staying put? Another major question is how will the FCC be able to both establish and monitor the wholesale rates for access to Bell operating company networks? There are many challenges and questions presented by Title I of the Act that created unintended consequences and legislation in the years that followed. Several of these issues will be addressed in this study.

C. TITLE II – BROADCAST SERVICES

1. Summary

Title II attempts to secure the position of radio and television broadcast stations in their respective markets by allowing more cross-ownership and mergers. This section allows these broadcasters to concentrate their power so that they don't get "squeezed out" by more powerful companies in the cable and Digital Broadcast Satellite (DBS) sectors. The cross-ownership stipulation essentially means that a company can now own interests in both the cable system and the television-broadcasting network. This is an apparent effort to ensure that these services (free access to television and radio) remain available to the general public for the foreseeable future.

These are significant measures in the sense that more consolidation can occur in the ownership of these stations at a national level. This section seems to signal that, indeed, a large number of radio and television stations will lose their local, grass roots flavor as owners consolidate stations nationally and implement more syndicated programming. There are, however, detailed requirements in the Act that limit the coverage of any one company and its station coverage. For instance, Title II states that the national audience reach limitation for individual television stations will be 35 percent.¹²

Also, the terms for all broadcasting licenses were changed to eight years. The licenses were previously five years for TV broadcast stations and seven years for radio broadcast stations. Further, the law now requires that

¹² *Telecommunications Act of 1996*. Federal Communications Commission. 30 April 2002: 68. http://www.fcc.gov/Reports/tcom1996.pdf>.

...each applicant for the renewal of a commercial or noncommercial television license shall attach as an exhibit to the application a summary of written comments and suggestions received from the public and maintained by the licensee...that comment on the applicant's programming, if any, and that are characterized by the commenter as constituting violent programming.¹³

In other words, the stations must include customer complaints about violent programming when they apply for a license. This part of the law pertains to violence and does not specifically address complaints about sexually explicit material. This stipulation expresses the importance of this issue to Congress at the time and foreshadows its appearance in Title V of the Act.

Another important part of the Broadcast Services portion of the Act concerns spectrum access and the advent of digital TV. To further ensure that television broadcasters don't become extinct in the near future, they are permitted to maintain the current monopoly on their portion of the spectrum. Further, under the provisions of Title II, they are permitted to expand their licensed spectrum -- for free – as long as they use this newly attained spectrum for the development of digital broadcasting. The broadcasters, therefore, gain free use of this additional spectrum with one major stipulation – they must front the millions of dollars necessary to develop and expand the use of digital TV. Further, broadcasters can use the additional spectrum for other uses such as data and paging, but they will have to pay a fee to do this.¹⁴

2. Remaining Challenges and Questions Related to Title II

With the advent of cross ownership, the FCC faces a new challenge of monitoring and enforcing abuses by cable companies who buy broadcast stations and use them to exclude competing broadcast stations from appearing on their cable band at a reasonable price. The general intention is to secure the tradition of broadcast stations, for the time being. Unfortunately, it seems that some aspects of this legislation further empower current larger stakeholders to further improve their market position.

¹³ *Telecommunications Act of 1996*. Federal Communications Commission. 30 April 2002: 71. http://www.fcc.gov/Reports/tcom1996.pdf>.

¹⁴ Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 68.

Another intention of Title II is to encourage the development of digital TV through spectrum incentives for broadcasters. The assumption seems to be that eventually the majority of the analog spectrum will be turned over for digital use of some sort, though it is not clear if the primary use will be for digital TV. However, it remains to be seen if most broadcasters will be willing to spend millions on this technology now with no real guarantee of its proliferation as the primary medium for television viewers. Title II seeks to take positive steps toward preserving the presence of broadcasters as competitors in their markets. However, it seems that several unintended consequences, as mentioned above, can result from these regulations. The next section of this paper takes a look at Title III, which details regulations for the cable industry.

D. TITLE III – CABLE

1. Summary

Although this section focuses on the cable system, it has a number of significant implications for the telecommunications sector. The Act provides incentives for cable companies to engage in *facilities-based competition* with local exchange providers in the telecommunications market. Section 303 essentially exempts cable companies from state and local regulation if they elect to compete with the Bell operating companies. For example, this section states that

...if a cable operator or affiliate... is engaged in the provision of telecommunications services...[it will] not be required to obtain a franchise under this title for the provision of telecommunications services.¹⁵

The assumption in this part of the law is that cable companies *want* to compete with the incumbent telephone companies.

Another significant aspect is that Title III calls for the deregulation of pricing for cable companies, largely due to competition from DBS providers and the potential for the proliferation of digital TV (as outlined in the Broadcast Services portion of the Act). An underlying intention of this provision is that it will encourage telephone companies to compete in the cable market, thus fostering more cross-market competition and less monopolies, especially at the local level.

¹⁵ *Telecommunications Act of 1996*. Federal Communications Commission. 30 April 2002: 84. http://www.fcc.gov/Reports/tcom1996.pdf>.

Further, some things remained the same for the cable system. Cable providers are still required to carry local broadcast stations on a third of their channels. So, while deregulation occurred in the pricing realm there still remains a certain amount of regulation related to the cable system to ensure that broadcast stations are not cut out of the loop.

Another part of the law indicates that if phone companies want to compete with cable companies for video delivery, then they will also become subject to the appropriate cable system regulations. The workaround for this is that if they deliver their services via a wireless solution, then the phone companies are not subject to cable regulations. This part of the act also includes provisions for the emerging Open Video Systems (OVS). OVS is basically

...a hybrid between a common carrier arrangement (such as video dial tone had been envisioned) and a programmed service such as cable operators offer, without many of the entangling regulations of either.¹⁶

Basically, because OVS is developed on multiple platforms, Section 651 indicates that this technology is not subject to many of the individual regulations that relate to video and telecommunications services, respectively.

2. Remaining Challenges and Questions Related to Title III

The large portion of this act encourages and outlines general provisions for cross-market competition between cable companies and phone companies. Phone companies had certainly indicated, prior to 1996, that they wanted to compete with cable companies. On the other hand, the same cannot necessarily be said for how willing cable companies are to venture into facilities-based competition with the local exchange companies. The law generally discourages domination of both markets by cable and phone companies. However, there seem to be several workarounds for both to greatly expand their services into the other sector while still maintaining their stronghold on their market share.

E. TITLE IV – REGULATORY REFORM

1. Summary

This part of the Act basically describes the role of the regulator -- that is, the role of the FCC -- in promoting competition in the telecommunications sector as well as

¹⁶ Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 72.

serving the interests of the consumers. Further, this section more or less equates the interests of the consumers to competition in the marketplace. Title IV later goes on to generally describe how and when a telecommunications company can submit a petition regarding forbearance by the FCC.

Also, the language of Title IV seeks to lay the groundwork for deregulation and the limited involvement of the FCC in the future. For instance, Section 10 states that the FCC should not apply regulation to telecommunications carriers or telecommunications service providers if (1) enforcement of such regulation or provision is not necessary to ensure that the charges practices, classifications, or regulations...in connection with that carrier or service are just and reasonable...; (2) enforcement of such regulation or provision is not necessary for the protection of consumers; and (3) forbearance from applying such provision or regulation is consistent with the public interest."¹⁷

2. Remaining Challenges and Questions Related to Title IV

Although Title IV has a positive purpose (promote competition and work toward deregulation) and is not particularly controversial, there still remain some issues of contention after reading this part of the Act. First, the FCC must be cognizant of how quickly it moves toward deregulation as this process can often immediately benefit dominant companies in a particular region. One has to look no further than the price of deregulation of the cable companies resulting from the Act for a prime illustration of this point. According to the FCC, cable prices rose three times higher than inflation in 1996 and four times faster than inflation in 1997.

Another challenging aspect of Title IV involves the ability of telecommunications companies to petition certain regulation by the FCC. This stipulation created a situation in which there was a flood of litigation by the incumbents, especially during the first two years following the passage of the Act. To further complicate the ensuing legal battles between local phone companies and the FCC, state and federal regulators were also pitted against each other to determine their respective roles in working toward an environment that fosters more competition in the telecommunications sector.

¹⁷ *Telecommunications Act of 1996.* Federal Communications Commission. 3 May 2002: 88-89. http://www.fcc.gov/Reports/tcom1996.pdf>.

¹⁸ Aufderheide, Patricia. *Communications Policy and the Public Interest: The Telecommunications Act of 1996.* New York: The Guilford Press, 1999: 83.

Perhaps the most positive point made in Title IV is the explicit connection between the public interest of the consumer and a competitive telecommunications environment, especially in regard to the local markets. Although at first glance this seems to be a rather benign statement with little substance or power, it does set a precedent that can guide FCC regulation and future telecommunications law.

F. TITLE V – OBSCENITY AND VIOLENCE

1. Summary

This portion of the Telecom Act of 1996 created the most controversy and was the focus of the majority of the mainstream press coverage after its passage into law. Title V consists of two main sections: Subtitle A -- Obscene, Harassing, and Wrongful Utilization of Telecommunications Facilities and Subtitle B -- Violence. The short-title of Subtitle A is the Communications Decency Act of 1996 (CDA). The CDA attempts to address the protection of innocent people, especially minors, from exposure to obscene material or language via telecommunications networks. This part of the Act is particularly interesting because it also attempts to address the availability of these materials over the Internet (which was most dominantly accessed via dial-in in 1996). It is also worth mentioning that the CDA continues the regulations that require cable companies to block and scramble channels that the subscriber did not request.

The most significant feature of Subtitle B is that it required the television industry to develop a ratings standard system similar to that in the motion picture industry. Actually, the Act states that if the industry does not come up with a ratings system to get approved within a year then the FCC will take on this task. This ratings system is required presumably to address violence and adult content on television.

Further, Subtitle B requires the installment of a V-chip in new television sets that are manufactured. The responsibility for this lies with the manufacturers of the television sets, not with the consumer. The V-chip is intended to act as a filter, specifically for violent content in television programs. Subtitle B specifically requires that

...in the case of an apparatus designed to receive television signals that are shipped in interstate commerce or manufactured in the United States and that have a picture screen 13 inches or greater in size (measured diagonally), that such apparatus be equipped with a feature designed to

enable viewers to block display of all programs with a common rating, except as otherwise permitted by regulations...¹⁹

This requirement ties together the ratings system and a technological device to give the consumer the power to filter out material according to their viewing preferences.

2. Remaining Challenges and Questions Related to Title V

Title V not only attempts take on content issues but also tries to address the role of technology (i.e., the Internet, the V-chip) in monitoring and filtering content. This part of the Act also represents the power of lobbyists to get their agenda inserted into a piece of legislation. Title V also represents more regulation by the government in a law whose presumed intention is to head the communications industries toward deregulation and less involvement on the part of the government.

The CDA, in particular, had so many shortcomings that most of it was found unconstitutional in a US Supreme Court decision in 1997.²⁰ The initial problem that comes to mind is the difficulty in determining what material is considered indecent and offensive. The language in this portion of the Act is simply too ambiguous, leaving tremendous room for debate in the courtroom. Further, the CDA seems to neither understand nor adequately address the distributed manner in which information is available on the Internet. Also, the CDA further complicates the relationship between state and federal institutions in enforcing and monitoring this part of the Act.

Subtitle B resulted in the current ratings system that exists in the television industry today. Ratings are typically displayed at the beginning of the program and sometimes at intervals throughout the program to alert the viewer of its rating and content. The issues of violence and obscenity in the media (especially on television and the Internet) continue to be frequently debated topics in the communications industries.

G. TITLE VI – EFFECTS ON OTHER LAWS

This section of the Act essentially addresses any effects on existing anti-trust laws as well as on other federal, local, and state laws. Most importantly, Title VI states that the Telecom Act of 1996 overrides the consent decree that broke up AT&T.

¹⁹ *Telecommunications Act of 1996*. Federal Communications Commission. 3 May 2002: 104. http://www.fcc.gov/Reports/tcom1996.pdf>.

²⁰ Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 187.

Any conduct or activity that was, before the date of enactment of this Act, subject to any restriction or obligation imposed by the AT&T Consent Decree shall, on and after such date, be subject to the restrictions and obligations imposed by the Communications Act of 1934 as amended by this Act and shall not be subject to the restrictions and the obligations imposed by such Consent Decree.²¹

Title VI also describes similar provisions pertaining to the GTE and McCaw Consent Decrees. Further, it states that the Act will not change existing federal, state, or local law unless it specifically changes or addresses one of those laws.

H. TITLE VII – MISCELLANEOUS PROVISIONS

Title VII addresses several different topics such as billing procedures, use of calling cards, and access to telecommunications information such as subscriber lists and pole attachments. Title VII also has provisions for the establishment and expansion of various funding channels such as the Telecommunications Development Fund (TDF) and the National Education Technology Funding Corporation. The TDF is intended to provide money to small businesses and groups to conduct research in the telecommunications industry. The TDF was criticized by some as an affirmative action mechanism that specifically targets ethnic minority groups.²² However, this perception was at least partially addressed by several court decisions after the Act was passed.

The National Education Technology Funding Corporation already existed when the Act was written. The corporation basically provides economic assistance to organizations such as public schools and libraries to improve their telecommunications and Internet services. One part of the Act facilitates funding and assistance to states to

...create, maintain, utilize and upgrade interactive high capacity networks capable of providing audio, visual and data communications for elementary schools, secondary schools and public libraries.²³

In short, Title VII attempts to "clean up" any remaining issues or requirements that resulted from other parts of the Act. The next chapter will expand upon several of

²¹ *Telecommunications Act of 1996*. Federal Communications Commission. 3 May 2002: 107. http://www.fcc.gov/Reports/tcom1996.pdf>.

²² Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 78.

²³ *Telecommunications Act of 1996.* Federal Communications Commission. 3 May 2002: 124. http://www.fcc.gov/Reports/tcom1996.pdf>.

the "Remaining Challenges and Questions" noted in this chapter by describing several trends that emerged in the telecommunications market in the wake of the Telecom Act of 1996.

III. TELECOM INDUSTRY SINCE 1996

A. INTRODUCTION

The previous chapter mentioned a series of "Remaining Challenges and Questions" related to the Telecom Act of 1996. This chapter will focus on some of the tangible results of unfinished business and ambiguities associated with the document. For instance, several trends emerged following the passage of the Act. Two major trends that will be examined in this chapter include: 1) A period of litigation (and ensuing court battles) rather than cooperation, particularly on the part of the local telephone service providers and 2) A series of mergers and corporate alliances in the communications industry and, more specifically, in the telecom sector. Both of these topics will also highlight, in many instances, the regulation difficulties that the FCC often experienced after the passage of the Telecom Act.

B. LITIGATION AND CONTINUING COURT BATTLES

The period following the passage of the Act has been marked by a series of interrelated and quite complicated court cases, many of which started with litigation on the part of both the RBOCs and long distance companies such as AT&T. For instance, the following court case example illustrates attempts by the incumbents to combat the regulations brought on by the Act as well as their strategy of thwarting competition and maintaining market advantage by stalling in the courtroom. In 1998, SBC Communications, US West (later bought by Qwest), and Bell Atlantic (later became Verizon after a merger with GTE) filed a case, contesting the barriers to their entry into long-distance markets created by the Act. In his ruling, a federal judge in Texas declared unconstitutional the portions of the Act that bar local Bell companies' entry into long-distance service until they comply with the "Competitive Checklist" described in the previous chapter.

The FCC's argument that the long distance market was not yet ready for entry by the RBOCs was essentially rejected. In short, the judge stated that these provisions were unfair and amounted to an unconstitutional bill of attainder.²⁴ An "unconstitutional bill

²⁴ Crandall, Robert W. "Judicial Activism May Lower Your Phone Bill." *Wall Street Journal.* 7 January 1998. 10 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

of attainder" essentially means that a particular group, or company in this case, has been singled out without a trial. However, the case's prominence in the public eye did not end in Texas. Later in 1998, Joel Klein, the U.S. chief antitrust enforcer, argued that the regulation was appropriate because the RBOCs were not being punished but rather given one thing in return for another. He further stated that the motive of the regulation was to "create a free market among local carriers and a competitive market among long-distance carriers." This case demonstrates the complicated nature of telecom cases and further clouds the FCC's role in opening markets to fair competition.

The litigation trend that came in the wake of the Act also involved some heated disagreements between state and federal regulators regarding their role in a procompetitive environment. For instance, the Supreme Court suggested in 1998 that the FCC had all but shattered the traditional role of states in setting phone rates. This discussion occurred during oral arguments to consider overturning the rules regarding RBOCs and long-distance competition that were previously suspended, as mentioned above. The contention was that the states' regulatory role had been greatly diminished – in favor of more regulation and oversight on the part of the FCC. In fact, Justice Stephen Breyer stated the following: "I've read through these [rules] ... and I don't see how the state maintains a significant regulatory role." The issue in the hands of the Supreme Court justices was really whether or not the FCC, in its eagerness to create a more competitive market, had expanded its own role without permission from Congress.

The cases mentioned above illustrate the rush of litigation, particularly during the two years immediately following the passage of the Telecom Act. However, the courtroom battles surrounding FCC regulations have not been isolated to that period. There have been some rather significant recent developments in the legal saga between the RBOCs and the FCC. In May 2002, the Supreme Court ruled that the government had the authority to force the RBOCs to lease their networks to competitors at wholesale

²⁵ Simons, John. "Opening Arguments Begin in Bells' Suit Challenging Telecommunications Law." Wall Street Journal. 10 July 1998. 10 May 2002

 $<\!\! http://proquest.umi.com/pqdweb?RQT=\!\!306\&TS=\!\!1030597360\!\!>.$

²⁶ Felsenthal, Edward. "High Court Questions U.S. Rules On Local-Telephone Competition." *Wall Street Journal.* 14 October 1998. 10 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

rates. The wholesale rates are actually based on an estimation of costs that competitors would experience if they built their own network with current technology.

The Bells, of course, argue that these estimations make it extremely difficult for them to recover the money that they spent over the years to built and upgrade their network infrastructure. The decision was the apparent culmination of six years of litigation and stalling by the Bells, marked by a long series of decisions and appeals in the higher courts. However, before one concludes that the market is truly ripe for competition by Bell rivals, consider the following quotation from Blair Levin, a Legg Mason analyst.

The Bell competitors had a lot to lose here, but the victory really only preserves the status quo. The companies are still facing a host of serious problems, from lack of capital to lack of growth, that this decision doesn't affect at all.²⁷

The case studies in this section illustrate the trend of litigation and ensuing courtroom battles in the aftermath of the Telecom Act. Only recently have some of the debates that started in 1996 been settled in the Supreme Court. However, newer issues such as competition in local telephone service and its role in high-speed Internet access emerged and continue to bounce around federal appeals courts. This leads one to the conclusion that legislation and regulation are not the solution to the competition problems in the telecom sector. There is a certain amount of regulation that is inherent to an industry as large as telecom. However, legislation and regulation are, at best, only part of a larger solution to meet the goal of promoting competition to ensure better prices and higher quality services for American telecom consumers. The next section of this chapter will discuss the trend of mergers and corporate alliances after 1996.

C. MERGERS AND CORPORATE ALLIANCES

The period following the passage of the Telecom Act was also marked by a series of mergers and corporate alliances in the telecommunications sector, and the communications industry in general. The main focus of this section will be on the RBOCs and their realignment since 1996. There were seven major local phone companies (referred to as Baby Bells or RBOCs) that existed in 1996: Ameritech, Bell

²⁷ Dreazen, Yochi J. "High Court Rules Against Baby Bells." *Wall Street Journal*. 14 May 2002. 22 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Atlantic, Bell South, NYNEX, Pacific Telesis Group, SBC Communications, and US West. These "original seven" were created as a result of the divestiture of AT&T in 1984 and essentially existed in 1996 as local service provider monopolies. GTE was also a prominent local telephone service provider in 1996. More will follow on GTE in the discussion of Verizon in this chapter.

The seven conducted a series of mergers and, by 2000, there were only four Baby Bells: Bell South, Qwest, SBC Communications and Verizon. These mergers will be examined by taking a brief look at each of the current Baby Bells that engaged in large mergers since 1996 and how they came to their current state. Table 3.1 also outlines the general mergers and acquisitions that occurred to obtain the resulting four Baby Bells.

...And Then There Were Four. The Transition from Seven to Four RBOCs

- The "original seven": Ameritech, Bell Atlantic, Bell South, NYNEX, Pacific Telesis Group, SBC Communications, and US West. Though not actually a "Baby Bell," GTE is also a local service provider.
- SBC Communications acquires Pacific Telesis Group in 199728
- Bell Atlantic acquires NYNEX in 199829
- SBC Communications acquires Ameritech in 1998³⁰
- Bell Atlantic GTE merge as Verizon Communications in 200031
- Owest acquires US West in 200032
- Bell South was the only Baby Bell from the original seven to "go it alone."
- The "remaining four": Bell South, Qwest, SBC Communications, and Verizon.

Table 3.1. Transition from Seven to Four Baby Bells.

²⁸ Wall Street Journal Staff. "SBC Communications Inc.: Merger with Pacific Telesis Closes, Creating a Giant." *Wall Street Journal*. 2 April 1997. 10 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

²⁹ Coy, Peter. "Commentary: Nynex, We Hardly Knew Ye." *Business Week Online*. 15 November 1999. 10 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

³⁰ Raghavan, Anita, et al. "Growing Up: SBC Communications to Acquire Ameritech in a \$55 Billion Deal." *Wall Street Journal.* 11 May 1998. 10 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

³¹ Carroll, Jill. "GTE, Bell Atlantic Get FCC Approval With Conditions." *Wall Street Journal.* 19 June 2000. 18 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

³² Wall Street Journal Staff. "Qwest Completes Deal for US West, Becomes Major Telecom Player." *Wall Street Journal.* 3 July 2000. 18 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

1. SBC Communications

SBC Communications, formerly Southwestern Bell Corp., represents a Baby Bell that became an absolute telecom behemoth through a series of acquisitions during the post-Telecom Act era. In April 1997, SBC Communications completed a \$16.5 billion of Pacific Telesis Group, another Baby Bell. The San Antonio, Texas company then acquired Ameritech, yet another Baby Bell, the very next year. At that point, SBC Communications had established itself as the single largest local phone monopoly in America. These mergers were part of a larger trend of mergers in the US during the midand late-1990s. In fact, there was \$280 billion worth of merger-and-acquisition activity in the first half of 1996 alone.³³

However, the merger-and-acquisition trend that dominated the telecom sector after 1996 was completely contradictory to the spirit and intent of the Telecom Act. Despite that fact, the FCC frequently approved super-mergers to allow the proliferation of companies such as SBC Communications and AT&T Corp. The result of the majority of the mergers has actually been *less* competition, especially in local phone service. Therefore, much of the blame for the current telecom situation lies with the FCC and not just with the large conglomerates in the local and long-distance service sectors.

SBC Communications kept busy in the years immediately following the passage of the Telecom Act not only with acquisitions but also in the courtroom. SBC led the battle, along with US West (later acquired by Qwest), against restrictions to the Baby Bells' quick entry into the long-distance market. They argued that incumbents were unlawfully penalized, as opposed to smaller local phone service providers, thus making their entry in the long-distance market more difficult. The FCC conveyed that this was a way of leveling the playing field and promoting more competition in local markets through incentives related to the long-distance market. As stated in the previous section on "Litigation and Continuing Court Battles," the FCC regulations were eventually upheld, forcing the Baby Bells to open their markets to competition before venturing into long-distance services.

³³ Lipin, Steven. "How Long Can Merger Boom Continue? – M&A Activity in U.S. Surge to \$280 Billion During First Half." *Wall Street Journal*. 11 July 1996. 18 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

The San Antonio-based telecom giant made more recent news with its court battles against another industry monopoly, Microsoft. SBC Communications joined other companies in the technology sector against Microsoft, encouraging tougher restraints against the software company's tactics to result from the ongoing antitrust trial. SBC Communications officials cite the continuing "convergence between computing and telecom, and how if unchecked Microsoft could use its personal-computing operating-system monopoly to hinder competition in the newest applications" in both the computer and telecommunications industries.³⁴ SBC Communications is particularly concerned that Microsoft can negatively affect its ventures into a new Internet-based service, Unified Messaging Service (UMS), which permits users to access e-mail, voice-mail, and faxes on several devices, including hand-held PCs and cell phones.

SBC Communication has also been the subject of negative publicity most recently due to problems with Pacific Bell, one of its units in the west. SBC's Pacific Bell agreed to pay a \$27 million fine for billing thousands of customers for high-speed Internet service that they never ordered. Customers who ordered but didn't receive services or customers who wanted to drop service but were still billed were also considered in the fine. The \$27 million fine goes into the state of California's general fund. This fine rivals the \$25.6 million Pac Bell also paid last year for its fraudulent marketing tactics.³⁵ The next Baby Bell that illustrates the merger-and-acquisition trend came out of its merger with a new and interesting name.

2. Verizon

Bell Atlantic and GTE stood poised to join forces when they announced in April 2000 that "Verizon" would be the name of the company resulting from their merger. Their merger represented the joining of a long-standing Baby Bell and a stalwart competitor in the telecommunications market. Their merger got FCC approval in June 2000, with some conditions. One significant condition was that GTE had to divest the majority of its Internet backbone network, known as "Genuity." Verizon Communications would have the opportunity to buy back Genuity if, within five years, it

³⁴ Kulish, Nicholas. "SBC Wants Restraints on Microsoft." *Wall Street Journal*. 9 April 2002. 18 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

³⁵ Associated Press. "Pacific Bell to Pay Fine of \$27 Million Over Improper Billing." *Wall Street Journal*. 8 July 2002. 17 July 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

was permitted to offer long-distance service in each of the 13 states in which it offers local service. Of course, to accomplish this end state Verizon would be required to open its local telephone network to competitors.

Further, the FCC required that Verizon provide certain services outside of its region or face fines of up to \$750 million. This incentive sought to compel the RBOCs to venture outside their regions in an attempt by the FCC to force the dominant local companies to comply with the Telecom Act. In fact, AT&T publicly opposed the merger because it argued that Bell Atlantic should be forced to open its local markets to competition, as required by the Act, before they are permitted to offer long-distance services. This was primarily due to the fact that a large portion of Genuity's services exists in Bell Atlantic's region.

Verizon also received a considerable amount of press when it launched its wireless operation, Verizon Wireless, in an Initial Public Offering (IPO) that same year. One telecom banker, when speaking of the wireless venture said, "It's the biggest landmark deal ever for our sector...It's like the Holy Grail."

This followed the June 2000 IPO of stock in Genuity Inc. for \$1.91 billion. Further, Verizon Wireless had close ties with British wireless company Vodaphone Air Touch PLC, which owned approximately 45% of the company. Verizon Wireless was quite aggressive in its efforts to become the leader in the wireless market. In fact, Verizon subscribers could access Web content on their cell phones for an extra fee of \$6.95 a month as early as the summer of 2000.³⁷

Despite its success in the wireless and local phone service markets, Verizon was not immune to the battles with the FCC over compliance with regulations of the Telecom Act in which the other Baby Bells were involved. For instance, in August 2000 Verizon paid \$2.7 million to the federal government because the company violated regulations set to open local telephone markets to competition. Verizon, like other RBOCs, was required to provide access to its central switching offices for competitors to install

³⁶ McGee, Suzanne. "Deals & Deal Makers: Verizon Taps Goldman, Merrill for IPO of Wireless Operation." *Wall Street Journal.* 12 July 2000. 18 May 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

³⁷ Harris, Nicole. "Verizon Will Launch Mobile-Phone Service Enabling Web Access." *Wall Street Journal*. 17 July 2000. 27 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

equipment. They failed to meet the deadline established by the regulation, which intended to give competitors access to the incumbents' networks.

More recently, Verizon has also experienced the ground swell of problems that have affected the telecom market as a whole. For example, in March 2000 Verizon withdrew its application to sell long-distance phone service in New Jersey because it suspected the application would be rejected. Rejection was imminent because the FCC was highly critical of the rates that Verizon charged competitors to transfer its customers. Verizon charged its competitors approximately \$160 each time it switches an individual customer to smaller competitors. Compare that fee to the usual \$20 to \$30 fee that is customary in other states.³⁸ At first glance, expanding into long-distance services in New Jersey may not seem like a big deal. However, this was a major setback in Verizon's efforts to expand its long-distance into the regions formerly served by Bell Atlantic.

Despite Verizon's success in the wireless market and its dominance in local phone services, the company has also been a victim of the recent financial woes that beset the telecom sector. Verizon cut the equivalent of 29,000 jobs in 2001 and plans to eliminate 10,000 more positions in 2002. Further, in April 2002 Verizon projected weaker than expected earnings as its stock fell 4.7% to \$41.82, a 52-week low at that time.³⁹ The next Baby Bell to be discussed is Qwest, another company that resulted from a relatively recent merger.

3. Qwest

Qwest Communications International was founded by Denver billionaire Philip Anschutz and incorporated in 1988. Qwest debuted on the NASDAQ in June 1997, trading at \$29.25 a share, which was significantly higher than its initial public offering price of \$22.40 (Note: Qwest shares were trading for less than \$2 during the summer of 2002.) Qwest also became the nation's fourth leading long-distance service provider in the late-1990s.

³⁸ Dreazen, Yochi J. "Verizon Withdraws FCC Application for Long Distance." *Wall Street Journal*. 20 March 2002. 27 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

³⁹ O'Brien, Robert. "Wall Street Gives an F on Profit Test." *Wall Street Journal*. 12 April 2002. 27 May 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

⁴⁰ Anonymous. "Qwest Communications Debuts on Nasdaq; Demand is Strong." *Wall Street Journal*, 30 June 1997. 27 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

A large part of Qwest's history centers around its CEOs. Philip Anschutz was actually responsible for bringing in the dynamic and often criticized Joseph Nacchio in early-1996. According to industry experts, Nacchio quit AT&T in December 1996, amid controversy over his job search with Qwest and an apparent "slap in the face" when AT&T looked outside of the company for the next president and eventual CEO. Nacchio became the third-ranked executive at Qwest during a time in which the company's business was booming as it was praised in both business and tech circles for spending billions to build a huge fiber optic long distance network.⁴¹

The company illustrates the case where it can be less expensive in the long run for an upstart to build a new network than it is for an incumbent to update an existing one. However, Qwest invested its money in building new long distance networks rather than in updated local networks, which is where more current technology is really needed. Qwest illustrated this strategy in 1998 when it invested billions of dollars, along with \$200 million from Microsoft, to build its own network that has the capacity to handle increasing amounts of data, Internet and multimedia traffic, as well as traditional voice traffic.⁴²

Nacchio succeeded Anschutz as CEO of Qwest and was extremely critical of former US West executives when Qwest acquired the RBOC in 2000. In fact, after moving into US West headquarters, Nacchio had a sign put up in the building that read: "Excuse our appearance. We're entrepreneurs. This building was built in a different era and we save cash by not remodeling." It is ironic that the US West portion of Qwest could actually be the part that saves the company. He is now criticized for the expansion and acquisitions that partially contributed to the decline of Qwest. Finally, in 2002, critics argued, "Mr. Nacchio no longer had enough credibility with Wall Street, the

⁴¹ Fondiller, David S. "Third Time's a Charm." *Forbes*. 8 September 1997. 27 May 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360>.

⁴² Wall Street Journal Staff. "Microsoft Invests \$200 Million in Qwest." *Wall Street Journal*. 15 December 1998. 27 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

⁴³ Solomon, Deborah. "Bad Connection: How Qwest's Merger With a Baby Bell Left Both in Trouble." *Wall Street Journal.* 2 April 2002. 27 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Securities and Exchange Commission (SEC) or employees to remain in his job."44 Nacchio was ousted and replaced by Richard Notebaert in June 2002.

Qwest currently provides a wide array of services to include local telecommunications, wireless, and directory services. Its current local service area includes 14 states: Arizona, Colorado, Idaho, Iowa, Minnesota, Montana, Nebraska, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.⁴⁵

Despite its relatively new arrival to the long-distance market, Qwest was not oblivious to the court battles between the long-distance service providers and the local phone companies in the late-1990s. Qwest was actually the subject of a 1998 lawsuit filed by AT&T Corp., MCI Communications Corp., and others against Ameritech Corp. and US West Inc. The long-distance companies charged that Ameritech and US West had violated the law because they were selling long-distance services in their territories (via Qwest) before they opened up their local market to rivals.⁴⁶ The FCC ruled in September 1998 that Ameritech and US West had indeed violated the law. The significance of this case involving Qwest was that it prevented a quick entry by the Baby Bells into the long-distance market and reinforced that they must comply with the "Competitive Checklist" outlined in Title I.

Qwest continued to establish itself as a major competitor in the telecom market and positioned itself for a merger with one of the Baby Bells, US West. The company's relatively quick emergence was partly due to an inflation of its own stock price, a condition that was not uncommon during the tech bubble of the mid- to late-1990s. Qwest was in a major battle in 1999 with Global Crossing Ltd. for the purchase of US West and eventually won out with an offer of \$37 billion. Qwest and US West merged during 2000 at a final value of \$43.5 billion for the merger.

⁴⁴ Solomon, Deborah and Blumenstein, Rebecca. "Leading the News: Qwest Decisions to Oust Nacchio, Hire Notebaert Please Investors." *Wall Street Journal.* 18 June 2002. 17 July 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360>.

⁴⁵ *Qwest Communications Int. (NYSE) – Business Description.* Yahoo! Marketguide. 29 July 2002 ">.

⁴⁶ Mehta, Stephanie N. and Simons, John. "FCC Rejects Alliance of Qwest, Two Bells." *Wall Street Journal*. 29 September 2002. 2 July 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Although Qwest emerged rather quickly as a major telecom competitor, to the level that it was able to leverage a merger to become one of only four Baby Bells, the company has not been immune to the recent telecom woes. In fact, Qwest is currently attempting to sell off parts of its business such as its Yellow Pages Directory Services to raise capital. This is in the wake of its collapsing stock price (\$5.06/share on Jun 5, 2002 compared to its 52-week-high which was over \$38).

Qwest's current problems do not end in the stock market but continue in the courtroom. Qwest is being investigated for swapping hundreds of millions of dollars worth of capacity with other carriers and using those sales to tabulate nonstandard revenue figures emphasized to investors to make their numbers seem more impressive.⁴⁷

Qwest has also been accused by AT&T of providing long-distance services without first opening its local markets to competition (as required by the Act). Qwest is in the worst shape of all the Baby Bells as of summer 2002 and seems also to illustrate how *not* to execute a takeover of an RBOC. There has even been talk that the company could be the first Baby Bell to declare Chapter 11. Company executives such as Joseph P. Nacchio, Qwest's former CEO, deny Chapter 11 bankruptcy as a possibility and insist that Qwest's current strategy of raising capital via sell-offs and cutbacks is one that will secure the future of the RBOC.⁴⁸ Time will only tell to what degree Qwest will rebound as the telecom sector as a whole recovers from its current slumber.

D. CONCLUSION

The period following the passage of the Telecom Act has been marked by the following major trends: 1) A period of litigation, rather than fair competition, particularly on the part of the local telephone service providers and 2) A series of mergers and corporate alliances in the telecom sector. Again, both of these issues illustrated many of the inadequacies of the Telecom Act and the difficulty that the FCC has in regulating the telecom sector.

⁴⁷ Berman, Dennis K. "SEC Questions Global Crossing on Swap Deals." *Wall Street Journal.* 10 May 2002. 2 July 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

⁴⁸ Solomon, Deborah. "Bad Connection: How Qwest's Merger With a Baby Bell Left Both in Trouble." *Wall Street Journal*. 2 April 2002. 27 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Bell South is noticeably absent from the discussion of mergers among the Baby Bells. Bell South was the only one of the "original seven" to avoid the trend of mergers after the Telecom Act was passed. That should not, however, imply that Bell South was dormant during the last six years. It has also directed its attention toward expansion into the wireless and long-distance markets during the last several years. During May 2002, Bell South was given permission to venture into the long-distance markets in Georgia and Louisiana. Like Verizon, Bell South has also cut thousands of jobs this year and reduced its earnings and revenue projections.

The drawn-out litigation and series of mergers, particularly among the Baby Bells, had some serious and lasting effects on the telecom market. One major effect is that the situation created by these factors slowed rather than promoted the proliferation of competition in the local phone service regions. Another major result of litigation and mergers is that service quality as well as network investment opportunities were hindered. One has to look only as far as Pacific Bell to see the degradation of service and rise in customer complaints during the last six years. The issue of mergers and acquisitions, as well as litigation, will surface again in the next chapter as companies that offer long-distance services such as AT&T, MCI-WorldCom, and Sprint are discussed.

IV. LONG-DISTANCE COMPETITORS

A. INTRODUCTION

An examination of AT&T, MCI WorldCom (now known simply as WorldCom), and Sprint will reveal three giant long-distance service leaders with very different strategies in reaction to the Telecom Act. AT&T's *voluntary* 1996 divestiture created a more nimble company that refocused its attention squarely on services such as the long-distance and cellular services, while eliminating distractions such as the telecom equipment and computer businesses. This is not to imply, however, that AT&T was completely devoid of mergers since 1996. The results of this strategy, as well as other significant factors since 1996, will be discussed in the next section of this chapter.

Meanwhile, WorldCom participated in the wave of mergers in the communications industry during the mid- and late-1990s. The eventual result was a tremendous devaluation of the company investigations of high-ranking WorldCom executives. The problem with this situation, even beyond the millions lost by investors and WorldCom employees, is that a significant reduction in competition for long-distance services will likely result. Therefore, the general telecom consumer may end up paying higher service fees partly because of WorldCom's apparent failures. More details surrounding MCI-WorldCom since 1996 will be provided in the third section of this chapter.

Sprint also has not been immune to the telecom woes of recent times. However, it has managed to avoid much of the controversy surrounding accounting practices and CEOs that some other companies in the telecom sector have experienced. Sprint's stock has suffered, jobs have been cut, and the company has been put in a position where it had to reduce its capital spending for the year. However, the outlook for Sprint in both the telecom sector itself (both wire line and wireless) as well as among investors remains positive.

B. AT&T

1. Second Divestiture of AT&T

The first major change that AT&T experienced since 1996 was its second divestiture that same year. Further, unlike the 1984 divestiture, this one was completely voluntary and initiated by the company. Recall from chapter one that the 1984 divestiture was the result of a settlement that was reached after years of negotiations between AT&T and the Department of Justice (DOJ). The results of the settlement are listed in Table 4.1, as a review of the main elements.

The End of The Bell System...As It Was Known

- The 22 BOCs separated from AT&T and grouped into seven RBOCs
- RBOCs required to provide "equal access" to long-distance companies
- RBOCs may sell but not manufacture customer premises equipment (CPE)
- AT&T retains long-distance facilities and Western Electric
- Bell Labs divided between AT&T and RBOCs
- 161 Local Access Transport Areas (LATAs) defined for 48 contiguous states
- AT&T released from 1956 decree (i.e., can now compete in computer business)

Table 4.1. AT&T Divestiture (1984) Results.⁴⁹

In September 1995, AT&T announced that it would be splitting the company into three separate companies over the following fifteen months. The companies that resulted are AT&T itself, which continued to provide communications services; Lucent Technologies, which was primarily concerned with telecom equipment; and NCR Corp., which manufactured and sold computers. Lucent and NCR both became independent companies during 1996. Refer to Table 4.2 for a review of the results of the 1996 divestiture.

⁴⁹ Lundy, G. M. "Telecommunications in the US: from Monopoly to Competition." Naval Postgraduate School, Monterey, CA, August 1993: 16.

AT&T's Divestiture of 1996

- AT&T separated into three companies:
 - AT&T communication services
 - Lucent Technologies telecom equipment
 - NCR Corp. computer business
- Lucent became independent company in Oct 1996
- NCR became independent company in Dec 1996
- Gives equipment business more opportunity to sell to RBOCs and other competitors
- Rids AT&T of troubled computer business
- Allows AT&T to focus on its core communications services (i.e., long-distance, wireless, Universal Cards, consulting)

Table 4.2. AT&T Divestiture (1996) Results.⁵⁰

AT&T now has several businesses, which include its long-distance services, AT&T Wireless Services, AT&T WorldNet services, AT&T Solutions consulting services, and the AT&T Universal Card.⁵¹

2. Influence of Telecom Act on Divestiture

When AT&T made the decision to divest it actually had a great deal to do with the Telecom Act. Leslie Helm and Scot J. Paltrow stated in 1995 that: "The second breakup of one of America's best-known corporate icons – a company which has dominated communications for more than a century and nurtured countless major inventions in its famed Bell Laboratories – was spurred in part by the expected passage this fall of a major telecommunications deregulation bill." AT&T executives such as CEO Robert E. Allen remembered the 1984 divestiture and the benefits that it produced, such as a distinct increase in AT&T stock.

⁵⁰ Hochheiser, Sheldon. *A Brief History of AT&T*. AT&T Corp. 23 July 2002 http://www.att.com/corporate/restructure/history.html>.

⁵¹ Ibid.

⁵² Helm, Leslie and Paltrow, Scot J.. "AT&T Will Split Into 3 Companies." *The Los Angeles Times*. 21 September 1995. 13 June 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

The Telecom Act also affected the 1996 divestiture in the sense that AT&T sought to refocus its efforts on long-distance service, while allowing the company to more nimbly venture into more recent undertakings such as cellular service. The divestiture was really done, therefore, to strengthen AT&T's position in telecom services and to counter the anticipated competition that it expected in the long-distance market as a result of the Telecom Act.

Further, AT&T wanted to concentrate on expanding the services and profitability in the cellular market following its 1993 acquisition of McCaw Cellular Communications Inc. for \$11.5 billion. The divestiture further allowed the equipment side of the business, Lucent Technologies, to separate in order to become more successful. It was simply difficult for AT&T to sell telecom equipment because other companies, such as the RBOCs and long-distance service providers, were not anxious to purchase equipment from a competitor. The second divestiture also allowed AT&T to rid itself of its troubled computer business, NCR.53

3. More Recent Developments

AT&T has made a number of other major changes since 1996, including an expansion into other areas such as cable broadband services as well as strategic "spin-offs" of services such as wireless, and eventually, its cable services as well. First, AT&T became the biggest TV cable operator in the US through mergers with cable companies such as TCI, which also controls Liberty Media. As of 1999, Liberty Media had stakes in almost 100 national and regional cable TV networks, including Black Entertainment Television and Discovery Communications.⁵⁴

AT&T expanded into the cable realm largely to use TV cable for voice and data services to be delivered to the home. The company has been instrumental in the broadband access sector, particularly through its cable lines, during the last several years. In fact, open-access to AT&T's and other cable companies' lines has been a hotly contested issue in the telecom sector during the last three or four years. For instance, AT&T won a case in June 2000 in which "Portland and other communities tried to force

⁵³ Ibid.

⁵⁴ Farhi, Paul. "AT&T: Too Big Once Again?" *The Washington Post.* 27 April 1999. 13 June 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

AT&T to open its pipes to all comers as part of their review of cable contracts after the merger of AT&T and Tele-Communications Inc. [TCI]"55 AT&T countered that it cannot profit from its broadband infrastructure if Internet Service Providers (ISPs) such as America Online or Earthlink can provide services using the network that it built. Despite AT&T's expansion in the broadband sector and its victories in the courtrooms, the company will soon split off its cable business via a merger of its cable division with Comcast.

In fact, AT&T announced in October 2000 that it would split off its company three ways to include: (1) wireless, (2) cable TV and (3) long-distance phone and corporate services. Comcast's purchase of AT&T Broadband has received shareholder approval and it does not appear that the FCC will attempt to block the deal. AT&T conducted a "spin-off" of AT&T Wireless, which has not been immune to the telecom slump. However, AT&T Wireless could see a pickup in its business in the very near future. WorldCom, in August 2002, told "its almost 2 million wireless customers to sign up with other carriers before the company ends mobile phone service in September. WorldCom customers who want to keep their phone numbers must sign up with Verizon Wireless, Cingular Wireless, AT&T Wireless, or Alltel Corp."56

Since 1996, AT&T has also been working on developing several other services beyond their traditional core capabilities, to include Voice over IP (VoIP) solutions. Hossein Eslambolchi, CTO of AT&T and president of Bell Labs, contends that most of our telephone calls will eventually connect over the Internet. However, it will obviously take several years to reach that point. VoIP traffic on AT&T's networks has doubled since 1999. In fact, Eslambolchi predicts that by 2006 50 percent of the traffic (as measured in minutes) will be from IP traffic.57

However, some critics argue that the technology is not yet ready for "prime time," thus limiting the amount of capital being invested in VoIP at this time. These critics

⁵⁵ Schwartz, John. "AT&T Wins Internet Decision." *The Washington Post.* 23 June 2000. 13 June 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

⁵⁶ Times Staff. "WorldCom Sends Customers to Rivals." *The Los Angeles Times*. 6 August 2002. 13 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

⁵⁷ Glascock, Stuart. "AT&T CTO Upbeat About VoIP." *INTERNETWEEK.com.* 11 April 2002. 25 July 2002 http://www.internetweek.com/story/INW20020411S0002.

generally cite security and reliability concerns with VoIP. Despite these concerns, Eslambolchi remains positive regarding telecommunications changes supported by the dominant IP infrastructure. However, it is unfortunate that AT&T has made so many gains in its VoIP efforts considering the pending sale of AT&T Broadband. The splitting off of AT&T Broadband essentially represents a current end to AT&T's efforts toward becoming a "one-stop shop" for telephone, data, and video services.

C. WORLDCOM

1. Background

WorldCom has become one of the largest telecommunications companies during the last several years, spanning a variety of services. The company has provided local, long-distance, and Internet services both in the US and internationally. WorldCom's primary business has been communications services to include voice, data, and Internet services. More specifically, WorldCom provides a litany of services, to include: switched and dedicated long-distance and local products, dedicated and dial-up Internet access, wireless services, 800 services, calling cards, private lines, broadband data services, debit cards, conference calling, messaging and mobility services, advanced billing systems, enhanced fax and data connections, high speed data communications, facilities management, local access to long distance companies, local access to asynchronous transfer mode (ATM) -based backbone service, Web server hosting and integration services, dial-up networking services and interconnection via Network Access Points to ISPs.⁵⁸

Since 1996 WorldCom became a global telecom giant largely through a series of mergers and acquisitions. In more recent times, the company's former CEO, Bernard Ebbers, appeared before Congress in July 2002 under subpoena to address the accounting scandal surrounding WorldCom.⁵⁹ Ebbers read a statement in which he asserted his innocence and noted some of his accomplishments at WorldCom, after which he opted not to answer any questions from members of Congress. This infuriated several members of Congress. In fact, Representative Max Sandlin (D-Tex) said, "To come up here and

⁵⁸ WorldCom, Inc. Company Profile. US Business Reporter. 2 August 2002 http://www.activemedia-guide.com/pkg worldcom.htm>.

⁵⁹ Goodman, Peter S. "On the Hill, a Taciturn Ebbers." *The Washington Post.* 9 July 2002. 18 July 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

say that he has engaged in no criminal activity and to set forth his affirmative statements in his defense and then to refuse to testify is an outrage. Mr. Ebbers is required to testify and we should make him do that."60 This section on WorldCom (including its merger with MCI) will describe the path to the situation in 2002. See Table 4.3 for major WorldCom milestones from 1983 - 2001. It will also conclude with a few important consequences of WorldCom's alleged abuses and failures – namely how consumers will end up having at least some of the costs passed on to them.

2. WorldCom Origins and Brief History

WorldCom began when, in 1983, businessmen Murray Waldron and William Rector developed a business plan for a competitive long-distance service provider called LDDS (Long-Distance Discount Service). Two years later Ebbers came aboard as the CEO of LDDS. In 1989, a long chain of mergers and acquisitions began when LDDS went public through the acquisition of Advantage Companies Inc. Over the next five years LDDS was engaged in a series of acquisitions and mergers to include: Advanced Telecommunications Corp., Resurgens Communications Group Inc, Metromedia Communications Corp., and IDB Communications Group Inc. After the acquisitions of Resurgens and Metromedia, LDDS emerged as the fourth-largest long distance network in the US.61

Another important acquisition occurred in 1995 when LDDS acquired Williams Telecommunications Group Inc. (WilTel) for \$2.5 billion. LDDS then changed its name to WorldCom Inc. and, with its new purchase, was also expanding its ability to provide quality voice and data transmission services. WorldCom gained access to the local loop the next year when it merged with MFS Communications Company Inc. (MFS). This was a rather significant move since MFS owned local network access facilities via digital fiber optic cable networks in and around major US and European cities. WorldCom was now a quickly growing international telecommunications service provider. However, more recent events to be covered later in this section suggest that perhaps the growth of the telecom company was too fast for its own good.

⁶⁰ Ibid.

⁶¹ Reuters News Service. "WorldCom Chronology Since 1983." *HoustonChronicle.com.* 26 June 2002. 31 July 2002 http://www.chron.com/cs/CDA/story.hts/business/1471793.

WorldCom shook up the telecom service sector when, in 1998, it completed a mammoth \$40 billion merger with successful long-distance competitor MCI Communications Corp. This unprecedented merger created an undeniable telecom giant with MCI WorldCom positioned in the top three of all long-distance carriers. It is also worth noting that during that same year WorldCom further expanded its services through mergers with Fiber Properties Inc. and CompuServe Corp. Their stocks eventually separated and since have been tracked as WorldCom Group and MCI Group. Critics argue that WorldCom separated into the two groups in 2001 in order to minimize the business and market failures that WorldCom was experiencing as a whole.

WorldCom Chronology from 1983 to 2001

- 1983 Businessmen Murray Waldron and William Rector sketch out a plan to create a discount long-distance provider called LDDS (Long-Distance Discount Service)
- 1985 Early investor Bernard Ebbers becomes CEO of LDDS
- 1989 LDDS becomes public through the acquisition of Advantage Companies Inc.
- 1992 LDDS merges with discount long-distance service provider Advanced Telecommunications Corp.
- 1993 LDDS acquires long-distance providers Resurgens Communications Group Inc and Metromedia Communications Corp.
- 1994 LDDS acquires domestic and international communications network IDB Communications Group Inc.
- 1995 LDDS acquires Williams Telecommunications Group Inc. (WilTel) for \$2.5 billion cash and changes its name to WorldCom Inc.
- 1996 WorldCom merges with MFS Communications Company Inc. (MFS), and UUNet Technologies Inc., an Internet access provider for businesses.
- 1998 WorldCom completes three mergers: with MCI Communications Corp., Brooks Fiber Properties Inc., and CompuServe Corp.
- 2000 US and European regulators block the proposed merger with Sprint; WorldCom and Sprint terminate their merger agreement.
- 2001 World Com merges with Intermedia Communications Inc., a provider of data and Internet services to businesses.

Table 4.3. WorldCom Chronology (1983-2001). (After: HoustonChronicle.com)⁶²

⁶² Ihid

The next few years showed no slow down in WorldCom's desire to continue to grow through mergers. In fact, WorldCom and Sprint agreed to merge in 1999. However, the Department of Justice nixed the proposal in 2000. Their major problem with the merger was that, according to the DOJ, in the end it would have been the consumer who suffered. Going from the "Big 3" (AT&T, MCI WorldCom, and Sprint) to the "Big 2" (AT&T and WorldCom), the DOJ submitted, would have resulted in the consumer being forced to pay higher prices for lower quality service while experiencing less technological innovation in the telecommunications industry.⁶³ Such a merger might have affected the long-distance consumer in an adverse manner though a merger of two of the top three long-distance service providers.

3. More Recent WorldCom Events

Table 4.4 outlines several of the key events surrounding WorldCom's demise during 2002. The Securities and Exchange Commission (SEC) began to take a closer look at WorldCom's accounting procedures, to include its many loans to high-ranking executives, in March 2002.

The SEC is specifically taking a hard look at the \$366 million in personal loans that were granted to Ebbers by WorldCom while he sat as CEO of the company. Ebbers subsequently resigned, at the request of several WorldCom officials, in April 2002 amid controversy surrounding his personal loans as well as his responsibility in putting WorldCom in such an undesirable position. John Sidgemore, the current WorldCom CEO, commented that Ebbers "had trouble figuring out how to take care of it [the loans] and still be CEO of the company. He has a lot of things to take care of personally."⁶⁴

WorldCom's troubles had a detrimental effect not only on investors but also on the general consumer as the costs are inevitably passed on to them. For instance, during May 2002, while WorldCom was in crisis, MCI attempted to quietly raise its rates for the second time that same year. MCI Group imposed "a set of increases that will double some Sunday rates to 20 cents a minute and levy minimum charges on customers who

⁶³ Glassner Joanna. "Why the DOJ Killed MCI-Sprint." *Wired News.* 27 June 2000. 15 July 2002 http://www.wired.com/news/business/0,1367,37272,00.html.

⁶⁴ Solomon, Deborah and Blumenstein, Rebecca. "Loans Proved to Be Ebbers's Downfall." *Wall Street Journal*. 1 May 2002. 15 July 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

already pay some of its highest fees."65 Table 4.5 highlights some of the rate increases that MCI has passed on to consumers as a direct result of WorldCom's woes.

As the WorldCom Turns (2002)

- March 11 WorldCom receives a request for information from the SEC relating to accounting procedures and loans to officers
- April 3 WorldCom says it is cutting 3,700 jobs in the US or 6 percent of WorldCom group's staff, 4 percent of WorldCom's overall work force.
- April 30 WorldCom CEO Bernard Ebbers resigns. Vice Chairman John Sidgmore takes reigns of company.
- May 13 Standard & Poor's removes WorldCom from its S&P 500 Index.
- May 21 WorldCom says it will scrap dividend payments and eliminate its two tracking stocks, one that reflects its main Internet and data business and a second that reflects its residential long-distance telephone business.
- June 5 WorldCom says it will exit the wireless resale business and will cut jobs to reduce expenses and pare massive debts.
- June 25 WorldCom fires its chief financial officer after uncovering improper accounting of \$3.8 billion in expenses that covered up a net loss for 2001 and the first quarter of 2002. The company also says it will cut 17,000 jobs, more than 20 percent of its workforce.
- June 26 Nasdaq market halts trading in WorldCom's two tracking stocks, WorldCom Group and MCI Group. Shares of WorldCom touched as low as 9 cents before the halt. President Bush calls for full investigation of the matter.

Table 4.4. WorldCom Chain of Events (2002). (After: HoustonChronicle.com)⁶⁶

WorldCom's troubles continued in May 2002 amid huge job cuts and an alarming stock devaluation. In fact, the company announced that it would discontinue dividend payments to investors and eliminate its two tracking stocks: (1) WorldCom Group, which reflects its main Internet and data business, and (2) MCI Group, which tracks its residential long-distance telephone business. The next month saw the firing of

⁶⁵ Young, Shawn. "Pass the Pain: WorldCom Raises MCI Fees." *Wall Street Journal*. 2 May 2002. 21 July 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

⁶⁶ Reuters News Service. "WorldCom Chronology Since 1983." *HoustonChronicle.com.* 26 June 2002. 31 July 2002 http://www.chron.com/cs/CDA/story.hts/business/1471793.

WorldCom's Chief Financial Officer (CFO) as well as the exit of WorldCom Group and MCI Group from Nasdaq market trading.

Service	New Rate	Old Rate
Directory Assistance	\$2.49 per call	\$1.99 per call
Personal 800 numbers instate and inter-state	\$0.40 per minute	\$0.35 per minute
US calls all day Sunday (excludes some calling plans)	\$0.20 per minute	\$0.10 per minute

Table 4.5. MCI Fee Hikes (effective June 2002). (After: Wall Street Journal)⁶⁷

D. SPRINT

1. Background

Sprint Corporation (NYSE: SDE) is the holding company for two major telecomoperating units: Sprint FON (NYSE: FON) and Sprint PCS (NYSE: PCS). Sprint FON is the larger of the two units and includes wire line services (such as local access, long distance, and Internet infrastructure), product distribution, directory publishing, and various other telecom operations. Sprint PCS is the operating arm for the wireless digital network that serves the United States, Puerto Rico, and the Virgin Islands.⁶⁸

Sprint offers a fairly diverse array of products and services to both the average consumer and businesses. On the general consumer side, Sprint offers the following products and services: long-distance, local service, Sprint PCS wireless, high speed Internet access, traditional dial-up Internet services, and home office solutions. The following major business solutions are offered by Sprint: long-distance, local solutions, Sprint PCS wireless, high speed data transmission and access, Internet solutions, international services, and government solutions. Note that there is some overlap between business and personal solutions among Sprint's three staple products and services. As stated before, Sprint FON focuses primarily on wire line solutions while Sprint PCS focuses on wireless solutions. This situation highlights Sprint Corporation's

⁶⁷ Ibid.

⁶⁸ Sprint FON Group. Hoover's Online. 9 August 2002. http://www.hoovers.com/co/capsule/0/0,2163,11560,00.html.

role as the overall operating company to ensure that these products and services are integrated to provide seamless solutions to the customer.

Sprint also has several affiliates and corporate relationships that enhance the company's ability to provide better service. For example, Sprint PCS has no less than 15 affiliates to augment its wireless coverage throughout the United States. Further, Sprint has a strong business relationship with EarthLink for its Internet services. Sprint's current equity stake in EarthLink is approximately 27%.69

2. Sprint Origins and Brief History

Highlights of the period 1899-1989 will be given their deserved attention. However, the focus of the history will be on the period 1990-present.

The Sprint Corporation came into existence over 100 years ago in Kansas. Cleyson L. Brown founded the Brown Telephone Company in 1899 in an effort to give consumers a local alternative to the Bell telephone companies. The company also was in the water and electric utilities during its formative years, changing its name several times but maintained its focus on telephone services. Like many companies, the Brown Telephone Company was hit hard by the Great Depression and had to reorganize under bankruptcy laws, becoming United Utilities. United Utilities continued to expand during the post-Great Depression era, becoming Bell telephone's number two competitor by the 1950s.71

The company again changed its name to United Telecommunications in 1972. By the mid-1970s, United Telecommunications had more than 3.5 million lines in the United States and had finally reached the \$1 billion revenue watermark. By the end of the 1970s, the company continued its innovative ways by beginning to install fiber-optic cable networks and digital switches. The company was clearly poised for success in the technologically growing telecommunications field. However, the next decade would be marked less by technological developments than by corporate battles involving AT&T and its competitors, with considerable intervention from Congress.

⁶⁹ Sprint. One Sprint. Many Solutions. Sprint Corp. 10 August 2002. http://www.sprint.com/>.

⁷⁰ Hoffman, John R. "That Was a Pin?" The History of Sprint Corp. Overland Park, KS: Leathers Publishing, 2000: 2.

⁷¹ Sprint. One Sprint. Many Solutions. Sprint Corp. 10 August 2002. http://www.sprint.com/.

During the 1980s, the familiar Sprint name emerged (after a merger and subsequent split with GTE) and the company reached a major crossroads in its arrival as a major competitor in the telecommunications industry. Sprint developed a plan to install the only fully digital, fiber-optic long-distance network in the United States. Despite the company's innovations and new networks, Sprint managed to lose almost \$1.8 billion from 1986-1989.⁷² These losses could have been, in part, due to the cost of building a new network for long distance services.

The company did manage to develop a network on which the nation's first coast-to-coast fiber-optic phone call was made. In 1992, United Telecommunications chose to adopt the nationally recognized name of it long distance company to become the Sprint Corporation.⁷³ By 1993, Sprint had diversified within the telecommunications industry with footprints in the long-distance, local, and wireless services. In 1994, Sprint entered a global partnership with Deutche Telekom and France Telecom. During that same year, Sprint joined with several cable companies to develop a nationwide network to provide wireless personal communications service (PCS) in addition to offering several telephone services along with cable service.⁷⁴

Sprint continued its international expansion in 1995, building partnerships with both Canadian and Mexican (Telmex) telecommunications providers. During the second half of the 1990s, Sprint continued to develop technologies in both its wire line (Sprint FON) and wireless (Sprint PCS) divisions. In 1996, the company proposed a multiplexing technology that proposed to increase the capacity of its fiber-optic network by 1,600%. On the wireless side, Sprint PCS achieved coverage of nearly 260 million people by 1997.

The rest of the 1990s are marked by continued efforts on the part of Sprint to develop increased bandwidth, Internet services, and improved wireless services. For five years in a row during the 1990s, J.D. Power and associates rated Sprint first in customer service among high volume long distance users.

⁷² Hoffman, John R. "That Was a Pin?" The History of Sprint Corp. Overland Park, KS: Leathers Publishing, 2000: 2.

⁷³ Sprint. One Sprint. Many Solutions. Sprint Corp. 10 August 2002. http://www.sprint.com/.

⁷⁴ Hoffman, John R. "That Was a Pin?" The History of Sprint Corp. Overland Park, KS: Leathers Publishing, 2000: 83.

Sprint's failed merger with MCI/WorldCom marked the year 2000. As of fall 2001, Sprint FON (the wire line division) continued to be the number one non-Baby Bell local service provider with over 8 million lines in 18 states.

3. More Recent Sprint Events

Sprint and its major divisions, Sprint PCS and Sprint FON, have not been immune to the difficulties that have affected the telecom sector, largely during 2001 and 2002. For instance, during June 2002 Sprint announced that it was reducing expenditures in both the FON and PCS groups in order to reduce overall capital spending for the year. Sprint found another way to save money in July 2002 through a work force restructuring in its Global Markets Group, which resulted in a reduction of over 1,000 positions. During that same month, Sprint's stock continued to plunge and its credit status was cut to the lowest investment-grade ratings by Moody's Investors Service and Standard & Poor's. However, despite its current low grade, several of these ratings services still hold Sprint at a "stable outlook." 76

Despite its economic woes, Sprint has continued to attempt to find new services to provide to the consumer. For instance, Sprint PCS has recently come out with some new pricing packages for customers who want both voice and data access. Sprint PCS's monthly pricing for voice and data packages for phones ranges from a low of \$49.99, including 4,000 voice minutes and two megabytes of data, up to \$119.99, which includes 10,000 minutes and eight MB. The carrier is also offering an introductory \$99.99-permonth plan of unlimited data for laptop and PDA cards – comparable to a \$99.99 unlimited data plan unveiled by Verizon Wireless in May [2002] – including a promotion of three free months."77

E. CONCLUSION

The AT&T, WorldCom, and Sprint case studies examined in this chapter represent very different strategies during the post-Telecom Act era. AT&T conducted a

⁷⁵ Drucker, Jesse. "Sprint Cuts Forecast for Phone Business." *Wall Street Journal*. 14 July 2002. 18 July 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

⁷⁶ Barkley, Tom. "Sprint Allays Fear Of Cash Crunch With New Credit." *Wall Street Journal.* 31 June 2002. 21 July 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

⁷⁷ Drucker, Jesse. "Sprint PCS High-Speed Network To Have Wide Geographic Reach." *Wall Street Journal*. 9 August 2002. 15 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

voluntary divestiture in 1996 as well as more recent spin-offs of units such as AT&T Wireless and AT&T Broadband (pending). That is not to say that AT&T has not engaged in its share of acquisitions of companies such as TCI. However, the long-time industry leader appears to have adopted a strategy of divestiture and spin-offs when it senses trouble in the company or change in the telecom sector.

One is hard pressed to question the success of the 1984 divestiture as well as the wisdom in divesting NCR and Lucent in 1996. However, the more recent pending split of AT&T Broadband runs completely contrary to AT&T's efforts over the last several years to integrate voice, data and video services. The sense in divesting the company of its broadband unit, which it is assumed would provide the capacity for these services, is questionable.

Sprint also has not been immune to the telecom woes of recent times. However, it has managed to avoid much of the controversy surrounding accounting practices and CEOs that some other companies in the telecom sector have experienced. Sprint's stock has suffered, jobs have been cut, and the company has been put in a position where it had to reduce it capital spending for the year. However, the outlook for Sprint in both the telecom sector itself (both wire line and wireless) as well as among investors remains positive.

WorldCom, on the other hand, represents a company that engaged in many mergers and had its accounting practices investigated during 2002, both partly contributing to the devaluation of the company. The cost of allegedly problematic business practices -- on the part of individuals such as former CEO Bernard Ebbers-- has been passed on to the investor, the consumer (i.e., MCI rate hikes), and the telecom market as a whole. More importantly, the apparent doomed fate of WorldCom could represent a major shakeup and a huge step backwards for the telecom sector.

In fact, FCC Chairman Michael Powell suggested in July 2002 that a Baby Bell could possibly be given approval to take over WorldCom, given the current crisis with WorldCom and telecoms in general.⁷⁸ The repercussions of such a move would certainly

⁷⁸ Dreazen, Yochi J. "FCC's Powell Says Telecom 'Crisis' May Allow a Bell to Buy WorldCom." *Wall Street Journal.* 15 July 2002. 15 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

affect the industry for the next decade. This situation (failure/troubles with companies such as WorldCom, Global Crossing, and Qwest) was created in part by the Telecom Act itself. The Act promoted competition among the Baby Bells and long-distance companies but made a miscalculation in not accounting for the fact that they would acquire each other and therefore reduce the number of competitors in the telecom market. The next chapter will explore this issue further as startups such as Global Crossing Ltd. and McLeod USA Inc. are discussed.

V. TELECOM START-UPS

A. INTRODUCTION

The Telecom Act of 1996 deregulated the telecom sector, thus creating an environment that was supposed to be ideal for new companies to emerge. The emergence of new telecom companies and the demand for workers occurred very quickly after the passage of the Act. For instance, the telecom sector saw an expansion of approximately 331,000 jobs before peaking in late 2000. However, the subsequent telecom bust saw layoffs totaling well over 500,000 positions.⁷⁹ These figures are in contrast to the dotcom boom and bust, which primarily saw the elimination of smaller companies. The telecom bust has seen the downfall of larger companies such as WorldCom Inc. and Global Crossing Ltd.

Some industry experts contend that a major problem associated with the post-deregulation era created by the Telecom Act was that the Internet wasn't growing at the predicted pace of 1,000-fold annual increases. Telecom companies and investors rushed to build fiber optic networks throughout the world to handle the anticipated Internet traffic. Now the industry is faced with an excess inventory of telecom equipment and a telecom slide with no immediate end in sight. The result was, according to experts, that the telecom boom created about \$470 billion in debt and a large glut of capacity.⁸⁰

This chapter will utilize the case studies of Global Crossing Ltd. and McLeodUSA Inc. as examples of telecom start-ups and to draw conclusions about the post-1996 deregulation era. Global Crossing is a Bermuda-based telecom start-up that was involved in building vast international and undersea fiber optic networks. McLeodUSA is a telecom start-up that ventured into the difficult local phone business as a competitive local exchange carrier (CLEC). This term is used in contrast to incumbent local exchange carrier (ILEC), which refers to RBOCs such as SBC Communications, Verizon, Qwest, and Bell South and their subsidiaries (i.e., Pacific Bell). Despite their

⁷⁹ Blumenstein, Rebecca. "Lives on Hold: As It Deepens, Telecom Bust Is Taking a Heavy Human Toll." *Wall Street Journal.* 19 August 2002. 21 August 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

⁸⁰ Ibid.

efforts to compete in a deregulated market both Global Crossing and McLeodUSA were forced into Chapter 11 bankruptcy protection in 2002 in order to salvage what they built during the telecom boom. This chapter will first focus on the case study of Global Crossing Ltd.

B. GLOBAL CROSSING

1. Background/Overview

Global Crossing Ltd. provides global Internet and long-distance telecommunications facilities and related services. The company constructed a network of undersea and terrestrial digital fiber optic cable systems to provide these services. Global Crossing's integrated global Internet Protocol (IP) –based network connects hundreds of cities and over 25 countries in the Western Hemisphere and Europe. The network extends into Asia as well through its subsidiary, Asia Global Crossing. The company provides data and voice services through these networks.

The company acquired Global Marine Systems, Frontier Corporation and Racal Telecom in 1999. Global Crossing has since sold its Web hosting unit (GlobalCenter) and its local exchange carrier operations. "Global Crossing is further reorganizing under Chapter 11 bankruptcy protection and has agreed to sell a 61.5% majority stake in the company to telecom units of Hutchison Whampoa and Singapore Technologies."81 The following section, as well as Tables 5.1 and 5.3 provide more details about the events surrounding Global Crossing.

2. Global Crossing Origins and Brief History

Global Crossing is a Bermuda-based telecommunications start-up that was launched by founder and Chairman Gary Winnick in 1997. The company also has domestic offices in Beverly Hills, CA and is an independent provider of undersea fiber optic telecommunications systems. Global Crossing's early history (note that the company was only five-years-old in 2002) is marked by an effort to build a vast transoceanic telecommunications network to carry large amounts of voice, data, and pictures/video. The company extended its network into Asia, Europe, and Latin America.

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⁸¹ *Global Crossing Ltd.* Hoover's Online. 19 August 2002 http://www.hoovers.com/co/capsule/4/0,2163,57204,00.html>.

For instance, Global Crossing launched a project in 1997 to connect the United States and the United Kingdom. Service began on this link in May 1998. The company, which went public in August 1998, made additional plans to construct its Pacific Crossing Segment, connecting the U.S., Japan, and portions of Latin America such as Mexico and Panama.

Global Crossing Chronology from 1997 to 1999

- March and December 1997 Global Crossing announces plans to connect the U.S. with the U.K. and Germany as well as Japan.
- December 1997 Global Crossing and Deutsche Telekom announce package agreement.
- August 1998 Global Crossing completes \$399 million IPO.
- October 1998 Global Crossing announces Pan European Crossing.
- October 1998 Level 3 Communications purchases capacity on the Global Crossing network.
- February 1999 Global Crossing passes \$1 billion mark for contract sales on global fiber optic network.
- February 1999 Global Crossing announces 2 for 1 stock split.
- July 1999 Global Crossing completes \$850 million acquisition of Cable & Wireless Global Marine.
- September 1999 Global Crossing completes merger with Frontier Corp.
- November 1999 Hutchison Whampoa and Global Crossing form \$1.2 billion fixed-line telecommunications and Internet 50/50 joint venture in Hong Kong.
- November 1999 Global Crossing completes acquisition of Racal Telecom.
- November 1999 Global Crossing, Softbank, and Microsoft complete formation of Asia Global Crossing.

Table 5.1. Global Crossing Chronology (1997-1999). (After: Global Crossing Website)⁸²

⁸² *Global Crossing Timeline*. Global Crossing. 19 August 2002 http://www.globalcrossing.com/xml/global/timeline.xml>.

Global Crossing's ambitious network construction plans and quick growth were indicative of a trend among several start-ups in the telecom sector. In hindsight, one can argue that the company was spending too much, too fast with little consideration for profitability. The counter to that argument is that it was essential for Global Crossing to attract investors and spend money to build its networks in order to be a viable competitor for years to come.

Its early history was also marked by an effort to attract investors to support the construction of its fiber optic networks. In the era of post-Telecom Act deregulation as well as the ongoing telecom and Internet booms, many investors and venture capitalists were eager to fund the extension of Global Crossing's networks. In fact, in May 1998 the company was able to attract \$800 million from investors to support its \$1.2 billion trans-Pacific connection project. The funding involved a combination of funds from American, Canadian, and Japanese companies.⁸³ During that same year, John Scanlon, formerly of Motorola, became the CEO of Global Crossing. He accepted the job for less than his \$600,000 salary and \$650,000 bonus that he received at Motorola. However, he also got options to purchase more than one million Global Crossing shares at his new job.⁸⁴

The majority of 1999 was marked by Global Crossing's battle with Qwest Communications to acquire Frontier Corp., a local and long-distance carrier, and US West, a "Baby Bell." Global Crossing named a price of approximately \$11 billion in stock for Frontier Corp. in March 1999. The company's reasons for the purchase included the addition of Frontier's corporate customers as well as the addition to U.S. business that the local and long-distance company would provide. Up to that point, Global Crossing was expanding internationally but lacked a widespread presence in the U.S.85 Frontier's position as the number five long-distance provider in the U.S. gave Global Crossing a stronger position domestically than it had in the past. Perhaps more

⁸³ Wall Street Journal Staff. "Business Brief – Global Crossing Ltd.: Company, Partners Arrange \$800 Million of Financing." *Wall Street Journal*. 12 May 1998. 21 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

⁸⁴ Lublin, Joann S. and Hardy, Quentin. "Motorola's Scanlon Quits for Start-Up; Move Could Disrupt Restructuring Plans." *Wall Street Journal*. 1 April 1998. 21 August 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

⁸⁵ Schiesel, Seth. "Frontier to Be Acquired by Global Crossing for \$10.8 Billion." *New York Times*. 18 March 1999. 17 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

importantly, Frontier would provide Global Crossing with some much-needed additional revenue on a regular basis. Table 5.2 provides a comparison of the two companies.

Company Basics	Global Crossing	Frontier
Headquarters	Hamilton, Bermuda	Rochester, NY
CEO (1999)	Robert Annunziata	Joseph P. Clayton
Revenue	\$424 million	\$2.6 billion
Net Income/Loss	-\$134.7 million	\$176 million
Employees	200	8,000 plus
Business	Building undersea and land- based fiber optic networks worldwide.	Operates local telephone service and nationwide long-distance network.

Table 5.2. Global Crossing – Frontier Comparison. (After: Wall Street Journal)⁸⁶

Global Crossing entered into talks with US West to acquire the smallest and, some experts contend, least successful of the Baby Bells. However, it wasn't long before Qwest joined the proceedings, expressing its interest in both Frontier and US West. The two start-ups (Global Crossing and Qwest) had similar strategies and were now poised to purchase much larger and more established telecom companies. "Qwest and Global Crossing are high-growth companies staking their futures on the global Internet boom. They trade like Internet stocks – though they are not – with billion-dollar market capitalizations based on the promise of fast growth, despite no earnings." Global Crossing and Qwest executives eventually worked out a compromise in July 1999, with Qwest acquiring US West (see Chapter III for more details) and Global Crossing acquiring Frontier. Recall that Global Crossing and Qwest were originally competing for the acquisition of both US West and Frontier.

⁸⁶ Lipin, Steven and Mehta, Stephanie N.. "Global Crossing Agrees to Buy Frontier – Deal Valued at \$11.2 Billion Would Offer a Foothold In U.S. Telecom Market." *Wall Street Journal*. 17 March 1999. 20 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

⁸⁷ Holson, Laura M. "The Battle for US West and Frontier Shows How Difficult the Sector Has Become to Analyze" *New York Times*. 21 June 1999. 20 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

During 2000, Global Crossing experienced some major shakeups in its CEO ranks and also started deals to divest its local phone and web services. Leo J. Hindery replaced Robert Annunziata as Global Crossing's CEO in March 2000. At the time, some speculated that Hindery was brought in, because of his experience, to position the financially struggling Global Crossing to be sold. Hindery was able to salvage the cable company Tele-Communications Inc. and sell it to AT&T in 1999.

Global Crossing had five CEOs since its founding in 1997. Following is a list of CEOs that Global Crossing went through, largely due to decisions made by founder and Chairman Gary Winnick (the year they became CEO is listed in parentheses):

- Jack Scanlon (1998)
- Robert Annunziata (1999)
- Leo J. Hindery, Jr. (March 2000)
- Thomas Casey (October 2000)
- John Legere (2001)

It is also argued that Hindery was brought on board to build customer relationships and continue the construction of Global Crossing's networks that were used to sell space primarily to major phone and Internet companies.⁸⁸ Hindery had the following comment when, in May 2000, he was asked about the supposed fiber optic/bandwidth glut. "On an intellectual level, there's one side of you that has to agree with that [glut theory]. But every time somebody tries to figure out demand, they tend to grossly underestimate. The reason is because in data, there's no practical limit to how much data transfer or bit traffic occurs in this world. It's involved in every aspect of our lives. It's media, it's entertainment, it's our financial services, our purchasing, our education, and it is our communications."⁸⁹

Hindery resigned as CEO that same year and was succeeded by Thomas Casey who was, at the time, vice chairman of Global Crossing. Hindery then joined GlobalCenter, Global Crossing's Web-hosting and Internet services unit, to oversee its \$6

⁸⁸ Douglass, Elizabeth. "Global Crossing Unexpectedly Replaces CEO." *The Los Angeles Times*. 3 March 2000. 20 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

⁸⁹ Douglass, Elizabeth. "Global Crossing's CEO Likes the Cards He's Holding." *The Los Angeles Times* 8 May 2000. 20 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

billion sale to Exodus Communications.⁹⁰ Further, Global Crossing announced that it would sell its local phone business to Citizens Communications for \$3.65 billion. The sale of these two units seems contradictory given the effort and money the company spent in acquisitions during its first three years in business. Ridding the company of the ability to provide both Internet/Web services and telecom services to corporate and residential customers alike has also been questioned, given the strategic importance of those two units.⁹¹

3. More Recent Global Crossing Events

Despite establishing its position as one of the leading providers of international fiber optic networks since being founded in 1997, Global Crossing's stock dropped significantly during 2000. Its stock price experienced a high of over \$60 per share and a low of just over \$10 during that year. The stock rebounded slightly in early 2001 but trading was discontinued in 2002 after shares were worth only two cents each. James Peltz, an investment journalist, explains how the company over-reached its corporate strategy, resulting in a dramatic drop in the company's value. "Global Crossing has had ambitious plans to provide telecom transmission lines both above ground and under the oceans. But then it went and spent a ridiculous \$10 to buy...a long-distance provider called Frontier...That's one big reason Global Crossing's stock has lost 70% of its value this year [2000]."92 Figure 5.1 tracks Global Crossing's stock price and trading volume since the company went public in 1998 into 2002.

As described in the previous section and Table 5.3, Global Crossing continued to buy companies during 2000 and 2001 despite its declining value in the stock market. Some experts contend that the company bought Frontier, a long-distance company, to create some additional cash flow from the long-distance business. The company attempted to also save itself through the sales of both GlobalCenter (the company's Web and Internet division) to Exodus and its ILEC business to Citizens Communications.

⁹⁰ Douglass, Elizabeth. "Global Crossing to Lose Its 2nd CEO This Year." *The Los Angeles Times*. 11 October 2000. 20 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

⁹¹ Douglass, Elizabeth. "Global Crossing to Sell Local Phone Business to Citizens." *The Los Angeles Times*. 13 July 2000. 20 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

⁹² Peltz, James and Hiltzik, Michael. "Lessons From Wall Street's Turkey Farm..." *The Los Angeles Times.* 28 November 2000. 21 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Despite its ability to raise billions of dollars through sales of some of its divisions, Global Crossing was not able to avoid bankruptcy in 2002.

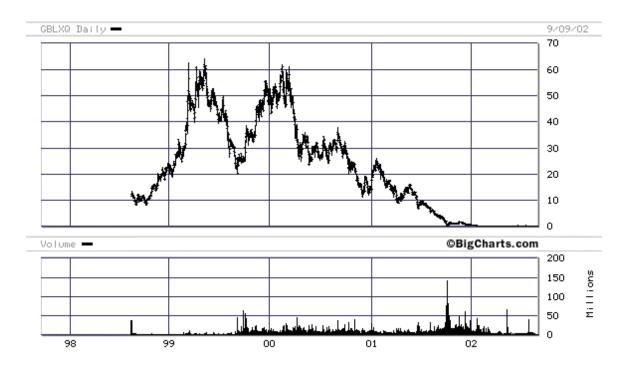


Figure 5.1. Global Crossing Stock Data (From: CBS MarketWatch.com)⁹³

Global Crossing was instrumental in building undersea and international fiber optic networks. In fact, after the company built its links between the US and Europe, it claimed 50 percent of all transatlantic capacity. However, by 2000 that share shrank to only 15 percent. While building its lines both domestically and abroad, the company banked on a large amount of business from both the large telecom companies and multinational companies such as Coca-Cola and American Express. However, Global Crossing overestimated its ability to penetrate the multinational market. "Much to [Global Crossing's] chagrin, that business is locked up by AT&T and WorldCom," said Pat Comack, and analyst with Guzman & Co. "They just couldn't penetrate the retail market."

⁹³ GBLXQ Global Crossing Ltd. CBS MarketWatch. 9 September 2002 .">http://bigcharts.marketwatch.com/intchart/frames/frames.asp?symb=GBLXQ&time=&freq=>.

⁹⁴ Stern, Christopher. "Global Crossing Files for Bankruptcy; Debt Load Dooms Former Highflier." The Washington Post. 29 January 2002. 21 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Global Crossing filed for Chapter 11 bankruptcy protection in January 2002, succumbing to a debt of approximately \$12 and a declining economy, especially in the telecom sector. At the same time, the company also announced that it was going to sell the majority of the company to two Asian firms – Hutchison Whampoa Ltd. and Singapore Technologies Telemedia Pte. Ltd.⁹⁵ The companies eventually agreed to a price of \$250 million for 61.5 percent of the reorganized (under bankruptcy) Global Crossing. However, this relatively small amount cannot necessarily be considered a bargain given Global Crossing's \$12 billion in debt.

Global Crossing Chronology from 2000 to 2002

- January 2000 KDD Group purchases \$100 million in capacity on Global Crossing network.
- June 2000 Global Crossing completes acquisition of IXnet and IPC.
- September 2000 Global Crossing announces that Exodus is set to acquire GlobalCenter (Global Crossing's Web and Internet division) for \$6.5 billion.
- October 2000 Asia Global Crossing prices IPO of 68 million common shares at \$7 per share; begins trading on NASDAQ.
- April 2001 Global Crossing carries traffic over its VoIP network between Europe and the U.S.
- June 2001 Global Crossing completes sale of ILEC business to Citizens Communications.
- August 2001 Asia Global Crossing increases its Trans-Pacific IP transit backbone speed to 3.7 Gbps, the fastest in Japan.
- October 2001 John Legere named CEO.
- January 2002 Global Crossing files for Chapter 11 bankruptcy protection.
- May 2002 The SEC interviews current and former Global Crossing employees about "swapping" of capacity to affect revenue figures.
- Aug 2002 Asian conglomerates Hutchison Whampoa Ltd. and Singapore Technologies Telemedia Pte. announce that they will buy a majority stake in Global Crossing for \$250 million.

Table 5.3. Global Crossing Chronology (2000-2002). (After: Global Crossing Website)⁹⁶

⁹⁵ Stern, Christopher. "Global Crossing Files for Bankruptcy; Debt Load Dooms Former Highflier." The Washington Post. 29 January 2002. 21 August 2002

http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

⁹⁶ *Global Crossing Timeline*. Global Crossing. 19 August 2002. http://www.globalcrossing.com/xml/global/timeline.xml.

It is unfortunate that the company came to this state, considering the technological ground that it broke since the passage of the Telecom Act which was intended to provide a conducive environment for companies such as Global Crossing to emerge and remain competitive on a long term basis. However, Global Crossing experienced many of the problems common to telecom start-ups since 1996. For instance, Global Crossing had to compete with several large international conglomerates of companies, known as consortiums, in order to build its undersea fiber optic networks. Such projects have been traditionally done by consortiums such as the JUS consortium of 33 companies that included AT&T, British Telecommunications PLC, MCI WorldCom, and Japan Telecom Co.97 On multiple occasions, Global Crossing filed petitions and lobbied with the FCC, arguing that such the consortiums actually inhibited competition in a post-Telecom Act environment that was supposed to allow for more competition. This situation is not unlike that experienced by CLECs such as McLeodUSA, which had to compete with the larger and more established ILECs.

C. MCLEODUSA

1. Background/Overview

McLeodUSA is most widely recognized as a standout CLEC that emerged as a competitor to the RBOCs since the passage of the Telecom Act in 1996. The company provides local services in 25 states in the Midwest, Southwest, Northwest, and Rocky Mountain regions. The facilities-based CLEC has expanded its networks largely through several acquisitions and limited construction, to include the following major equipment: 42 Asynchronous Transfer Mode (ATM) switches, 60 voice switches, 485 collocations, and over 31,000 miles of fiber optic cables.

The company considers the following to be its core telecom and communications services: local and long-distance services; dial-up and dedicated Internet access services; high-speed Internet access services; bandwidth and network facilities leasing and sales; and additional services such as virtual private networks (VPNs) and Web hosting. McLeodUSA also offers services in other areas to include: video, cellular, operator,

⁹⁷ Hardy, Quentin. "FCC Delay Sought On Consortium's Undersea Cable." *Wall Street Journal.* 8 January 1999. 17 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

payphone, mobile radio and paging services, and customer premise equipment (CPE) sales, and telephone directories.⁹⁸

Like Global Crossing, McLeodUSA also filed for Chapter 11 bankruptcy protection in January 2002. This bankruptcy proceeding included only the parent company, McLeodUSA Inc, and not any of its subsidiaries such as McLeodUSA Publishing and Illinois Consolidated Telephone Company. The next section begins the discussion of how McLeodUSA came to the point of bankruptcy in January 2000 – all in the pro-competitive environment that the Telecom Act sought to foster.

2. McLeodUSA Origins and Brief History

Clark E. McLeod, Chairman and CEO, started McLeod Telecommunications in 1991 as a provider of fiber optic maintenance services for the Iowa Communications Network. The company has focused on providing local phone services in second- and third-tier markets rather than trying to compete with the RBOCs and emerging CLECs in the saturated larger city market. The company expanded the regions in which it offered local service and also added long-distance to the services it offered during the early 1990s in states such as Iowa and Illinois.⁹⁹

The company eventually changed its name to McLeodUSA Inc and then conducted an IPO in 1996, after which it began acquiring several companies over the next few years. This was a trend common among many of the telecom startups after the passage of the Telecom Act. Many telecoms like McLeodUSA sought to expand their networks and services through a series of acquisitions during the late-1990s. This was largely due to the fact that RBOCs were able to stall the CLECs' construction of new networks through the filing of petitions and lobbying. Chapter III (Telecom Industry Since 1996) of this thesis provided some case studies in which this practice was implemented. The result was that the RBOCs were able to stall the CLECs, while the CLECs were burning through cash on loan to them from venture capitalists, banks, and other sources.

⁹⁸ *McLeodUSA – Business Description.* Yahoo! Finance Website. 20 August 2002 http://yahoo.marketguide.com/MGI/busidesc.asp?target=/stocks/companyinformation/busidesc&Ticker=MCLD>.

⁹⁹ Levine, Shira, et al. "America's 7 Most Innovative Operators." *America's Network.* 1 December 2000. 22 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

McLeodUSA made a series of acquisitions to extend its reach in the Midwestern and western states: Dakota Telecommunications Group and Ovation Communications (1999), Access Communications (1999), Splitrock Services (2000), and CapRock Communications (2000). Table 5.4 provides a list of some of McLeodUSA's most notable acquisitions.

Company	Year	Cost	Equipment/Base
			Gained
Ovation	1999	\$224 million	45,000 access lines
Communications			
Access	1999	\$147 million plus	30,000 customers
Communications		McLeodUSA stock	
Splitrock Services	2000	\$2.1 billion	350 POPs
CapRock	2000	\$532 million	95,000 access lines
Communications			ŕ

Table 5.4. McLeodUSA Acquisitions (1999-2000). (After: Telephony)¹⁰⁰

McLeodUSA was able to expand quickly in this manner to become a "super regional" largely due to the Telecom Act. "[Clark] McLeod defines a super regional as a carrier with fully integrated services, the transmission network and facility to deliver those services, and continuous geography, scale and scope. The new environment created by the Telecom Act of 1996 made the super regional feasible, McLeod said. National carriers are moving to become international and full service providers at the same time." Therefore, the growth of CLECs was related to the pace and conditions that the Telecom Act would allow.

During the late-1990s, McLeodUSA was regarded as a top notch CLEC and one of the few that actually had a chance of competing with the RBOCs in their own regions. The company targeted local customers that traditionally had no alternatives for their local phone services. The following passage describes part of the company's strategy to accomplish competition in the local loop. "McLeod decided on an unconventional – and

¹⁰⁰ Quinton, Brian. "Rock Slide." *Telephony*. 9 October 2000. 22 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

¹⁰¹ Snyder, Beth. "McLeod Merger is Simply Super." *Telephony*. 23 June 1997. 22 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

cheap – way into the business. Instead of building costly fiber optic networks first and attracting customers later, McLeod decided to buy service from US West and Ameritech and then resell it to customers...By bundling local service with long-distance, Internet, and paging service, McLeod has carved out 30% of the market in some Midwestern cities with populations ranging from 8,000 to 300,000. Local telephone companies can't offer such a broad package until they adhere to requirements for opening their lines to competition [as required by the Telecom Act]."102

The strategy described above is insufficient because true competition in the local loop is not likely as long as the vast majority of CLECs are leasing lines at wholesale rates from RBOCs rather than building newer and more advanced networks. This case exposes a fundamental flaw in the Telecom Act – it provided an environment in which smaller companies could more readily lease lines from RBOCs. However, it did not consider the importance of encouraging investment in the construction of new networks and ensuring that the RBOCs could not delay the emergence of CLECs in their markets through the courtroom. The resale approach, therefore, can be considered a short-term solution for competition at the local level because resale of local services is simply not profitable. Resale of local services is most often done in order to package other, more profitable services such as long-distance along with them.

3. More Recent McLeodUSA Events

McLeodUSA, like most other telecom start-ups, saw its stock plummet and debt grow during 2001 amid the telecom bust during that year. The company's slide was particularly distressing to industry experts, given the fact that McLeodUSA was considered one of the strongest start-ups to emerge during the 1990s. "McLeod, a small competitive local exchange carrier (CLEC), had become the market's poster child; its strong management, earnings predictability and smart acquisition strategy cemented its position as one of the survivors in what is widely expected to be a rapidly consolidating CLEC market. But there are only a handful of CLECs that find themselves in the catbird seat this year, which means that those that have not done well will either be gobbled up or

¹⁰² Crockett, Roger O. "No Telecom Hayseed." *Business Week.* 9 February 1998. 22 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

go out of business altogether."¹⁰³ Figure 5.2 tracks McLeodUSA's stock price and trading volume from 1998 until it declared Chapter 11 bankruptcy in January 2002.

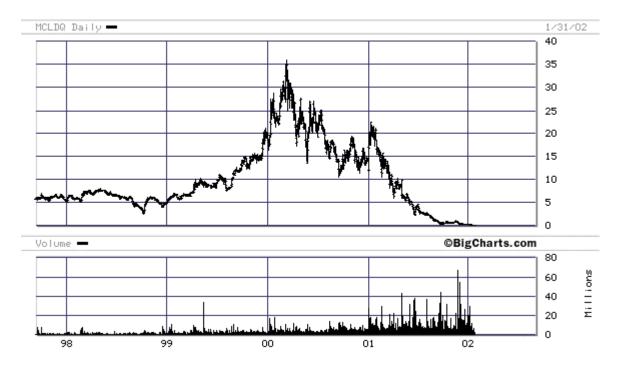


Figure 5.2. McLeodUSA Stock Data (From: CBS MarketWatch.com)¹⁰⁴

Like Global Crossing, McLeodUSA's stock also dropped significantly during 2000 and plummeted during 2001. Its stock saw a high of just over \$35 per share and a low near \$10 per share during 2000. The stock recovered to over \$20 per share in early 2001 but was trading for cents on the dollar before the end of the year. The fact that the company was generating heavy losses in 2000 and 2001 had a great effect on its stock price. For instance, McLeodUSA's fourth quarter losses nearly tripled in 2000 (\$140.9 million) from same quarter during the previous year (\$52 million). The company projected 50 percent revenue growth during 2001 but was still unable to recover

¹⁰³ Etzel, Barbara. "The Final Connection: Top CLECs Look to Expand While the Rest Face Extinction." *The Investment Dealer's Digest.* 5 March 2001. 22 August 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

¹⁰⁴ MCLDQ McLeodUSA Incorporated. CBS MarketWatch. 7 September 2002 ">http://bigcharts.marketwatch.com/intchart/frames/frames.asp?symb=MCLDQ&time=&freq=>">http://bigcharts.marketwatch.com/intchart/frames/frames/frames.asp?symb=MCLDQ&time=&freq=>">http://bigcharts.marketwatch.com/intchart/frames/frames/frames.asp?symb=MCLDQ&time=&freq=>">http://bigcharts.marketwatch.com/intchart/frames/frames/frames.asp?symb=MCLDQ&time=&freq=>">http://bigcharts.marketwatch.com/intchart/frames/frames/frames.asp?symb=MCLDQ&time=&freq=>">http://bigcharts.marketwatch.com/intchart/frames/fra

financially.¹⁰⁵ The losses were not necessarily indicative of a poor company strategy but rather reflected a larger trend in the telecom industry at the time. This demonstrates that the "telecom bust" that began in early 2000 even affected established competitors such as McLeodUSA.

Despite its strong position as a leader among CLECs, McLeodUSA declared Chapter 11 bankruptcy in January 2002. Again, the bankruptcy proceeding included only the parent company, McLeodUSA Inc, and not any of its subsidiaries such as McLeodUSA Publishing and Illinois Consolidated Telephone Company. This was in an effort to continue operating without a large amount of debt and also to salvage some of what the company built over the last ten years.

D. SUMMARY/CONCLUSION

Both Global Crossing and McLeodUSA were telecom start-ups that declared bankruptcy in January 2002. However, the two companies existed in different markets with very different strategies toward establishing themselves. Global Crossing competed primarily for a strong position among companies that built undersea fiber optic telecommunications systems. Global Crossing sought to compete through an effort to build a vast transoceanic telecommunications network to carry large amounts of voice, data, and pictures/video. McLeodUSA, while it offered other services, was primarily a CLEC that established itself in the local phone market through the leasing of lines from RBOCs such as US West. However, this strategy was flawed as it did not build the foundation for long-term competition with the Baby Bells. For this reason, the FCC should implement measures that consider the importance of encouraging investment in the construction of new networks and ensuring that the RBOCs cannot delay the emergence of CLECs in their markets through the courtroom. Such a strategy will promote the emergence of both competition and more technologically advanced telecommunications networks. The next chapter provides a thesis summary and recommendations for improvement in the telecom sector.

¹⁰⁵ Anonymous. "McLeodUSA takes a dive." *Multichannel News.* 5 February 2001. 22 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

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VI. CONCLUSION

A. THESIS SUMMARY

The purpose of the Telecom Act of 1996 was

...to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies. 106

In short, the Act was intended to address the lack of competition and reduce regulation in local telephone services as well as in other areas of the telecommunications sector.

During the period since January 1996 (when the Act was passed), the competitive situation in telecommunications, particularly regarding local telephone services, has experienced little improvement. Local Telephone service consumers are still given a limited choice as the RBOCs continue to dominate coverage in the local loop.

The Act seeks to address the long-standing monopolies in the local market that have existed for incumbents (i.e., RBOCs). Title I requires local phone companies to resell their services to potential competitors at wholesale rates. This essentially seeks to give these competitors previously unavailable access to the majority of local phone loops owned by the incumbents.

The strategy described above is insufficient because true competition in the local loop is not likely as long as the vast majority of CLECs are leasing lines at wholesale rates from RBOCs rather than building newer and more advanced networks. The McLeodUSA case study exposed a fundamental flaw in the Telecom Act – it provided an environment in which smaller companies could more readily lease lines from RBOCs. However, it did not consider the importance of encouraging investment in the construction of new networks and ensuring that the RBOCs could not delay the emergence of CLECs in their markets through the courtroom. The resale approach, therefore, can be considered a short-term solution for competition at the local level

¹⁰⁶ *Telecommunications Act of 1996.* Federal Communications Commission. 29 April 2002: 1. http://www.fcc.gov/Reports/tcom1996.pdf>.

because resale of local services is simply not profitable. Resale of local services is most often done in order to package other, more profitable services such as long-distance along with them.

The period following the passage of the Telecom Act has been marked by the following major trends: 1) A period of litigation, rather than fair competition, particularly on the part of the local telephone service providers and 2) A series of mergers and corporate alliances in the telecom sector. Both of these issues (from Chapter III) illustrated many of the inadequacies of the Telecom Act and the difficulty that the FCC has in regulating the telecom sector.

The drawn-out litigation and series of mergers, particularly among the Baby Bells, had some serious and lasting effects on the telecom market. One major effect is that the situation created by these factors slowed rather than promoted the proliferation of competition in the local phone service regions. Another major result of litigation and mergers is that service quality as well as network investment opportunities were hindered.

Moreover, the merger-and-acquisition trend that dominated the telecom sector after 1996 was completely contradictory to the spirit and intent of the Telecom Act. Despite that fact, the FCC frequently approved mergers to allow the RBOCs to become even stronger in the market. In fact, the post-Telecom Act period saw the number of RBOCs decrease in number from seven to four. The result of the majority of the mergers has actually been *less* competition, especially in local phone service. Therefore, much of the blame for the current telecom situation lies with the FCC and not just with the large conglomerates in the local and long-distance service sectors.

The AT&T, WorldCom, and Sprint case studies represented very different strategies during the post-Telecom Act era. AT&T conducted a voluntary divestiture in 1996 as well as more recent spin-offs of units such as AT&T Wireless and AT&T Broadband (pending). That is not to say that AT&T has not engaged in its share of acquisitions of companies such as TCI. However, the long-time industry leader appears to have adopted a strategy of divestiture and spin-offs when it senses trouble in the company or change in the telecom sector.

One is hard pressed to question the success of the 1984 divestiture as well as the wisdom in divesting NCR and Lucent in 1996. However, the more recent pending split of AT&T Broadband runs completely contrary to AT&T's efforts over the last several years to integrate voice, data and video services. The sense in divesting the company of its broadband unit, which it is assumed would provide the capacity for these services, is questioned by some experts.

Sprint also has not been immune to the telecom woes of recent times. However, it has managed to avoid much of the controversy surrounding accounting practices and CEOs that some other companies in the telecom sector have experienced. Sprint's stock has suffered, jobs have been cut, and the company has been put in a position where it had to reduce it capital spending for the year. However, the outlook for Sprint in both the telecom sector itself (both wire line and wireless) as well as among investors remains positive.

WorldCom, on the other hand, represents a company that engaged in many mergers and has seen its worth become almost completely devalued. The cost of WorldCom's failures has been passed on to both the investor and the consumer (see the MCI rate hikes in Chapter IV). More importantly, the apparent doomed fate of WorldCom could represent a major shakeup and a huge step backwards for the telecom sector.

In fact, FCC Chairman Michael Powell suggested in July 2002 that a Baby Bell could possibly be given approval to take over WorldCom, given the current crisis with WorldCom and telecoms in general. The repercussions of such a move could affect the industry for the next decade. This situation (failure/troubles with companies such as WorldCom, Global Crossing, and Qwest) was created in part by the Telecom Act itself. The Act promoted competition among the Baby Bells and long-distance companies but made a miscalculation in not accounting for the fact that they would acquire each other and therefore reduce the number of competitors in the telecom market.

¹⁰⁷ Dreazen, Yochi J. "FCC's Powell Says Telecom 'Crisis' May Allow a Bell to Buy WorldCom." *Wall Street Journal* 15 July 2002. 15 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Both Global Crossing and McLeodUSA were telecom start-ups that declared bankruptcy in January 2002. However, the two companies existed in different markets with very different strategies toward establishing themselves. Global Crossing competed primarily for a strong position among companies that built undersea fiber optic telecommunications systems. Global Crossing sought to compete through an effort to build a vast transoceanic telecommunications network to carry large amounts of voice, data, and pictures/video. McLeodUSA, while it offered other services, was primarily a CLEC that established itself in the local phone market through the leasing of lines from RBOCs such as US West. However, this strategy was flawed, as it did not build the foundation for long-term competition with the Baby Bells. For this reason, the FCC should implement measures that consider the importance of encouraging investment in the construction of new networks and ensuring that the RBOCs cannot delay the emergence of CLECs in their markets through the courtroom. Such a strategy will promote the emergence of both competition and more technologically advanced telecommunications networks.

B. RECOMMENDATIONS

Title IV of the Telecom Act draws an explicit connection between the public interest of the consumer and a competitive telecommunications environment, especially in regard to local markets. This statement in Title IV sets a precedent that should guide FCC regulation and future telecommunications law. The link between consumer interest and competitive telecommunications services also influenced the following recommendations.

- Problem: Since 1996, the major local phone companies (RBOCs) have repeatedly violated the Telecom Act of 1996. They have been able to pay lesser fines while stalling competitors, many of whom are relying on finite funds from investors, banks, and venture capital firms. It was in the best interests of the incumbents to pay the fines and wait out the competition.
- Recommendation: The FCC should make the fines high enough to force RBOCs to comply with the Act. This would be a more effective means of penalizing RBOCs for not complying with Telecom Act regulations such as access to networks by competitors and compliance with the Competitive Checklist.
- Problem: The Telecom Act established that RBOCs must provide access to their networks by competitors at wholesale rates. This practice has not

- resulted in a marked improvement in telecommunications competition. In fact, this part of the Act actually discouraged new investment in modern networks by both RBOCs and newer telecom companies.
- Recommendation: The FCC and Congress should implement measures to provide more incentive for investment in building new and more advanced local telecommunications networks (including telephone, TV cable, and high-speed Internet services). This means that RBOCs should be allowed to benefit from their own investments (past and future) and neither RBOCS nor start-ups should be forced to rent their own valuable networks to competitors at wholesale prices.
- Problem: A decrease in the number of RBOCs from seven to four since 1996 had a detrimental effect on local telephone competition. Consumers at the local level now have fewer choices than ever. Further, these remaining four RBOCs have become huge and powerful companies with the ability to lobby and influence Congress.
- Recommendation: The RBOCs should be split up. It is difficult to determine an appropriate number. At a minimum, there should be a return to seven RBOCs as was the case in 1996. However, going back to approximately 22 the number of BOCs in 1984 would be a more positive step toward providing choices for the consumer while reducing the RBOCs' excessive political power. This would also provide more opportunities for new competitors.
- Problem: At least one of the major local phone companies, SBC Communications, engaged in fraudulent marketing tactics. Pacific Bell, a subsidiary of SBC Communications, had thousands of instances of improper customer billing during 2000 and 2001. Fines of over \$25 million in 2001 did not deter Pacific Bell from continuing this practice. In fact, Pacific Bell paid another \$27 million in fines during 2002. 108
- Recommendation: The FCC should establish more aggressive service quality programs on a national level. At the very least, the FCC should provide specific guidance to states in order to enact better service quality and customer protection measures. Larger fines directed toward phone companies that violate these measures should provide more incentive for local phone companies to give customer service greater attention. Such a program has proven effective in the former NYNEX region where Public Utility Commissions were involved in monitoring and enforcement. 109

¹⁰⁸ Associated Press. "Pacific Bell to Pay Fine of \$27 Million Over Improper Billing." *Wall Street Journal*. 8 July 2002. 17 July 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

¹⁰⁹ Lundquist, Scott C. and Coleman, Scott A. *Promises and Realities: An Examination of the Post-Merger Performance of the SBC/Pacific Telesis and Bell Atlantic/NYNEX Companies – Executive Summary.* AARP Research. 17 July 2002 http://research.aarp.org/consume/d17000 promises 1.html.

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LIST OF REFERENCES

Anonymous. "McLeodUSA Takes a Dive." *Multichannel News.* 5 February 2001. 22 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

Anonymous. "Qwest Communications Debuts on Nasdaq; Demand is Strong." *Wall Street Journal*. 30 June 1997. 27 May 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

Associated Press. "Pacific Bell to Pay Fine of \$27 Million Over Improper Billing." *Wall Street Journal*. 8 July 2002. 17 July 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 64.

Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 68.

Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 72.

Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 78.

Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 83.

Aufderheide, Patricia. Communications Policy and the Public Interest: The Telecommunications Act of 1996. New York: The Guilford Press, 1999: 187.

Barkley, Tom. "Sprint Allays Fear of Cash Crunch With New Credit." *Wall Street Journal*. 31 June 2002. 21 July 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

Berman, Dennis K. "SEC Questions Global Crossing on Swap Deals." Wall Street Journal. 10 May 2002. 2 July 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

Blumenstein, Rebecca. "Lives on Hold: As It Deepens, Telecom Bust Is Taking a Heavy Human Toll." *Wall Street Journal*. 19 August 2002. 21 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Carroll, Jill. "GTE, Bell Atlantic Get FCC Approval With Conditions." *Wall Street Journal*. 19 June 2000. 18 May 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Coy, Peter. "Commentary: Nynex, We Hardly Knew Ye." *Business Week Online.* 15 November 1999. 10 May 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Crandall, Robert W. "Judicial Activism May Lower Your Phone Bill." Wall Street Journal. 7 January 1998. 10 May 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

Crockett, Roger O. "No Telecom Hayseed." *Business Week.* 9 February 1998. 22 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

Douglass, Elizabeth. "Global Crossing to Lose Its 2nd CEO This Year." *The Los Angeles Times.* 11 October 2000. 20 August 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Douglass, Elizabeth. "Global Crossing to Sell Local Phone Business to Citizens." *The Los Angeles Times.* 13 July 2000. 20 August 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Douglass, Elizabeth. "Global Crossing Unexpectedly Replaces CEO." *The Los Angeles Times.* 3 March 2000. 20 August 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Douglass, Elizabeth. "Global Crossing's CEO Likes the Cards He's Holding." *The Los Angeles Times.* 8 May 2000. 20 August 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

Dreazen, Yochi J. "FCC's Powell Says Telecom 'Crisis' May Allow a Bell to Buy WorldCom." *Wall Street Journal*. 15 July 2002. 15 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Dreazen, Yochi J. "High Court Rules Against Baby Bells." Wall Street Journal. 14 May 2002. 22 May 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Dreazen, Yochi J. "Verizon Withdraws FCC Application for Long Distance." *Wall Street Journal.* 20 March 2002. 27 May 2002

http://proguest.umi.com/pgdweb?RQT=306&TS=1030597360.

Drucker, Jesse. "Sprint Cuts Forecast for Phone Business." *Wall Street Journal*. 14 July 2002. 18 July 2002. http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Drucker, Jesse. "Sprint PCS High-Speed Network To Have Wide Geographic Reach." *Wall Street Journal.* 9 August 2002. 15 August 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

Etzel, Barbara. "The Final Connection: Top CLECs Look to Expand While the Rest Face Extinction." *The Investment Dealer's Digest.* 5 March 2001. 22 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Farhi, Paul. "AT&T: Too Big Once Again?" *The Washington* Post. 27 April 1999. 13 June 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Felsenthal, Edward. "High Court Questions U.S. Rules On Local-Telephone Competition." *Wall Street Journal*. 14 October 1998. 10 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Fondiller, David S. "Third Time's a Charm." *Forbes.* 8 September 1997. 27 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

GBLXQ Global Crossing Ltd. CBS MarketWatch. 9 September 2002 .">http://bigcharts.marketwatch.com/intchart/frames/frames.asp?symb=GBLXQ&time=&freq=>.

Glascock, Stuart. "AT&T CTO Upbeat About VoIP." *INTERNETWEEK.com.* 11 April 2002. 25 July 2002 http://www.internetweek.com/story/INW20020411S0002>.

Glassner Joanna. "Why the DOJ Killed MCI-Sprint." *Wired News.* 27 June 2000. 15 July 2002 http://www.wired.com/news/business/0,1367,37272,00.html.

Global Crossing Ltd. Hoover's Online. 19 August 2002 http://www.hoovers.com/co/capsule/4/0,2163,57204,00.html>.

Global Crossing Timeline. Global Crossing. 19 August 2002 http://www.globalcrossing.com/xml/global/timeline.xml>.

Goodman, Peter S. "On the Hill, a Taciturn Ebbers." *The Washington Post.* 9 July 2002. 18 July 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Hardy, Quentin. "FCC Delay Sought On Consortium's Undersea Cable." *Wall Street Journal*. 8 January 1999. 17 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Harris, Nicole. "Verizon Will Launch Mobile-Phone Service Enabling Web Access." *Wall Street Journal.* 17 July 2000. 27 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Helm, Leslie and Paltrow, Scot J. "AT&T Will Split Into 3 Companies." *The Los Angeles Times*. 21 September 1995. 13 June 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Hochheiser, Sheldon. *A Brief History of AT&T*. AT&T Corp. 23 July 2002 http://www.att.com/corporate/restructure/history.html>.

Hoffman, John R. "*That Was a Pin?*" *The History of Sprint Corp.* Overland Park, KS: Leathers Publishing, 2000: 2.

Hoffman, John R. "*That Was a Pin?*" *The History of Sprint Corp.* Overland Park, KS: Leathers Publishing, 2000: 83.

Holson, Laura M. "The Battle for US West and Frontier Shows How Difficult the Sector Has Become to Analyze" *New York Times*. 21 June 1999. 20 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Kulish, Nicholas. "SBC Wants Restraints on Microsoft." *Wall Street Journal*. 9 April 2002. 18 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Levine, Shira, et al. "America's 7 Most Innovative Operators." *America's Network.* 1 December 2000. 22 August 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Lipin, Steven and Mehta, Stephanie N. "Global Crossing Agrees to Buy Frontier – Deal Valued at \$11.2 Billion Would Offer a Foothold In U.S. Telecom Market." *Wall Street Journal.* 17 March 1999. 20 August 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Lipin, Steven. "How Long Can Merger Boom Continue? – M&A Activity in U.S. Surge to \$280 Billion During First Half." *Wall Street Journal*. 11 July 1996. 18 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Lublin, Joann S. and Hardy, Quentin. "Motorola's Scanlon Quits for Start-Up; Move Could Disrupt Restructuring Plans." *Wall Street Journal*. 1 April 1998. 21 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Lundquist, Scott C. and Coleman, Scott A. *Promises and Realities: An Examination of the Post-Merger Performance of the SBC/Pacific Telesis and Bell Atlantic/NYNEX Companies – Executive Summary.* AARP Research. 17 July 2002 http://research.aarp.org/consume/d17000 promises 1.html.

Lundy, G. M. "Telecommunications in the US: from Monopoly to Competition." Naval Postgraduate School, Monterey, CA, August 1993: 14.

Lundy, G. M. "Telecommunications in the US: from Monopoly to Competition." Naval Postgraduate School, Monterey, CA, August 1993: 16.

McGee, Suzanne. "Deals & Deal Makers: Verizon Taps Goldman, Merrill for IPO of Wireless Operation." *Wall Street Journal*. 12 July 2000. 18 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

MCLDQ McLeodUSA Incorporated. CBS MarketWatch. 7 September 2002 .">http://bigcharts.marketwatch.com/intchart/frames/frames.asp?symb=MCLDQ&time=&freq=>.

McLeodUSA – Business Description. Yahoo! Finance Website. 20 August 2002 ">http://yahoo.marketguide.com/MGI/busidesc.asp?target=/stocks/companyinformation/busidesc&Ticker=MCLD>">http://yahoo.marketguide.com/MGI/busidesc.asp?target=/stocks/companyinformation/busidesc.asp?target=/stocks/com

Mehta, Stephanie N. and Simons, John. "FCC Rejects Alliance of Qwest, Two Bells." *Wall Street Journal.* 29 September 2002. 2 July 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

O'Brien, Robert. "Wall Street Gives an F on Profit Test." *Wall Street Journal*. 12 April 2002. 27 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Peltz, James and Hiltzik, Michael. "Lessons From Wall Street's Turkey Farm..." *The Los Angeles Times*. 28 November 2000. 21 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Quinton, Brian. "Rock Slide." *Telephony*. 9 October 2000. 22 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Qwest Communications Int. (NYSE) – Business Description. Yahoo! Marketguide. 29 Jul. 2002

Raghavan, Anita, et al. "Growing Up: SBC Communications to Acquire Ameritech in a \$55 Billion Deal." *Wall Street Journal*. 11 May 1998. 10 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Reuters News Service. "WorldCom Chronology Since 1983." *HoustonChronicle.com*. 26 June 2002. 31 July 2002

http://www.chron.com/cs/CDA/story.hts/business/1471793.

Schiesel, Seth. "Frontier to Be Acquired by Global Crossing for \$10.8 Billion." *New York Times.* 18 March 1999. 17 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Schwartz, John. "AT&T Wins Internet Decision." *The Washington Post.* 23 June 2000. 13 June 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

Simons, John. "Opening Arguments Begin in Bells' Suit Challenging Telecommunications Law." *Wall Street Journal.* 10 July 1998. 10 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Snyder, Beth. "McLeod Merger is Simply Super." *Telephony*. 23 June 1997. 22 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Solomon, Deborah and Blumenstein, Rebecca. "Leading the News: Qwest Decisions to Oust Nacchio, Hire Notebaert Please Investors." *Wall Street Journal*. 18 June 2002. 17 July 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Solomon, Deborah and Blumenstein, Rebecca. "Loans Proved to Be Ebbers's Downfall." *Wall Street Journal*. 1 May 2002. 15 July 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

Solomon, Deborah. "Bad Connection: How Qwest's Merger With a Baby Bell Left Both in Trouble." *Wall Street Journal.* 2 April 2002. 27 May 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

Sprint FON Group. Hoover's Online. 9 August 2002. http://www.hoovers.com/co/capsule/0/0,2163,11560,00.html.

Sprint. One Sprint. Many Solutions. Sprint Corp. 10 August 2002. http://www.sprint.com/>.

Stern, Christopher. "Global Crossing Files for Bankruptcy; Debt Load Dooms Former Highflier." *The Washington Post.* 29 January 2002. 21 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Telecommunications Act of 1996. Federal Communications Commission. 29 April 2002: 1. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 29 April 2002: 5. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 29 April 2002: 7. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 29 April 2002: 40. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 29 April 2002: 48. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 29 April 2002: 19. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 29 April 2002: 1. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 30 April 2002: 68. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 30 April 2002: 71. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 30 April 2002: 84. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 3 May 2002: 88-89. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 3 May 2002: 104. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 3 May 2002: 107. http://www.fcc.gov/Reports/tcom1996.pdf>.

Telecommunications Act of 1996. Federal Communications Commission. 3 May 2002: 124. http://www.fcc.gov/Reports/tcom1996.pdf>.

Times Staff. "WorldCom Sends Customers to Rivals." *The Los Angeles Times*. 6 August 2002. 13 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Wall Street Journal Staff. "Business Brief – Global Crossing Ltd.: Company, Partners Arrange \$800 Million of Financing." *Wall Street Journal*. 12 May 1998. 21 August 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Wall Street Journal Staff. "Microsoft Invests \$200 Million in Qwest." *Wall Street Journal*. 15 December 1998. 27 May 2002 http://proquest.umi.com/pgdweb?RQT=306&TS=1030597360.

Wall Street Journal Staff. "Qwest Completes Deal for US West, Becomes Major Telecom Player." *Wall Street Journal*. 3 July 2000. 18 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

Wall Street Journal Staff. "SBC Communications Inc.: Merger with Pacific Telesis Closes, Creating a Giant." *Wall Street Journal.* 2 April 1997. 10 May 2002 http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360.

WorldCom, Inc. Company Profile. US Business Reporter. 2 August 2002 http://www.activemedia-guide.com/pkg worldcom.htm>.

Young, Shawn. "Pass the Pain: WorldCom Raises MCI Fees." Wall Street Journal. 2 May 2002. 21 July 2002

http://proquest.umi.com/pqdweb?RQT=306&TS=1030597360>.

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